SONY

S-BUS INTERFACE BOARD

BKP-7933

INSTALLATION MANUAL

1st Edition (Revised 1)

⚠警告

このマニュアルは，サービス専用です。
お客様が，このマニュアルに記載された設置や保守，点検，修理など行うと感電や火災，人身事故につながることがあります。
危険をさけるため，サービストレーニングを受けた技術者のみご使用ください。

⚠WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l’entretien. Afin de réduire les risques de décharge électrique, d’incendie ou de blessure n’effectuer que les réparations indiquées dans le mode d’emploi à moins d’être qualifié pour en effectuer d’autres. Pour toute réparation faire appel à une personne compétente uniquement.

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Manual Structure

1. Installation

Manual Structure

Purpose of this manual

This manual is the installation manual for S-BUS Interface Board BKP-7933.
This manual describes the information items necessary when the unit is supplied and installed.

Relative manuals

Besides this installation manual the following manuals are available for this unit.

- **BKP-7933 Maintenance Manual (Available on request)**
  This manual describes the information items that premise the service based on the components parts such as alignment, schematic diagrams, board layouts and spare parts lists, assuming use of service engineers.If this manual is required, please contact your local Sony Sales Office/Service Center.

- **CNU-700 Operation Manual (Supplied with CNU-700)**
  This manual is necessary for application and operation of CNU-700.

- **CNU-700 Maintenance Manual (Supplied with CNU-700)**
  This manual describes the information items necessary when CNU-700 is supplied and installed, items that premise the service based on the components parts such as schematic diagrams, board layouts and spare parts lists, assuming use of system and service engineers.

- **DVS-V1616/A3232B/V6464B/RS1616/TC3232/A3232, BVS-V3232/A3232, HDS-V3232 Installation Manual (for System Setup) (supplied with each unit)**
  It contains information on the initial settings of the software when installing the above units making up the digital router system.
  This manual is intended for system and service engineers, but operators can also refer to it when setting and changing the system.

- **BVP-900-series System Manual BKP-9901 (Available on request)**
  This manual is necessary for connection and operation of CNU-700 and other peripheral equipment, and for setup to control the routing switcher in the HD system.
  If this manual is required, please contact your local Sony Sales Office/Service Center.

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- Windows is a registered trademark of Microsoft Corporation.
- IBM and AT are registered trademarks of International Business Machine, Inc.

Section 1
Installation

1-1. Checking ROM Version

When the BKP-7933 is installed in the CNU-700, be sure to check that the ROM versions for IC4 and IC5/AT-89 board of the CNU-700 are Ver. 3.00 or higher. If the ROM needs to be replaced, contact your local Sony Sales Office/Service Center.

ROM Version

IC4/AT-89 board Ver. 3.00 or higher
IC5/AT-89 board Ver. 3.00 or higher

1-2. Configuration of BKP-7933

The BKP-7933 is composed of the following items.

- Main board (IF-689 board) (1)
- Rear panel (with CN-1558 board) (1)
- Installation manual (1)

1-3. Installation Procedure

This section explains briefly on installation procedures. Refer to each section for details.

Installation procedure	Section
1. Checking ROM Version	1-1. Checking ROM Version
2. Switch setting on the board	1-4. Setting Switches on the IF-689 Board
3. Installation of the IF-689 board/Rear panel	1-5. Installation
4. Connection	1-6. Connection
5. Setup	1-7. Setting Up
	1-9. Modification of RCP
	1-10. Using the BKP-7933 in the HD System
6. Data Backup/Restore	1-8. Data Backup/Restore

1-4. Setting Switches on the IF-689 Board

Notes

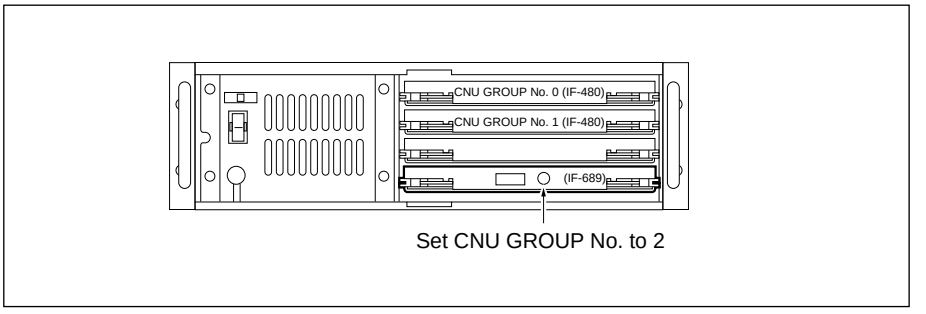
- Be sure make the switches settings for the CNU GROUP No. and S-BUS ID No. before turning on the power. It is no use in setting the switches after turning on the power.
- Do not change the following switches from their factory default settings.
  S5-8: OFF
  S201: 1(ON)

Setting of CNU GROUP No.

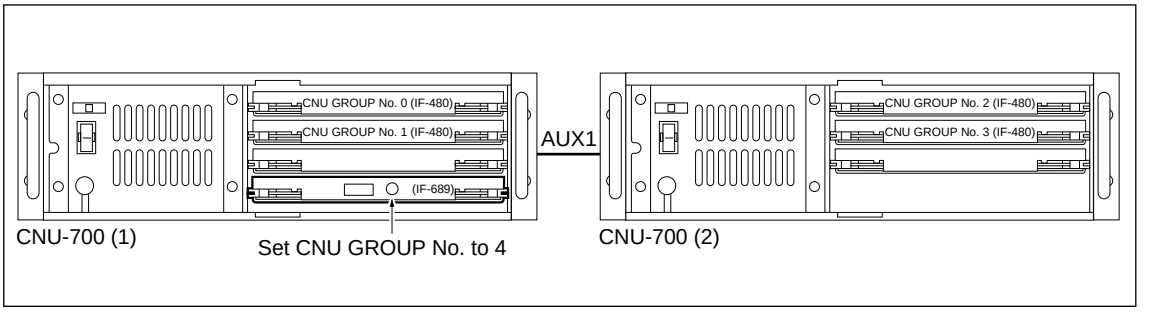
S3(CNU GROUP No.)
Set the CNU GROUP No. so that it should be unique in a system.
Factory default setting: 2

Setting Examples

1. When installing the BKP-7933 in the CNU-700 which is provided with the BKP-7930



2. When using the two CNU-700s which are provided with the BKP-7930



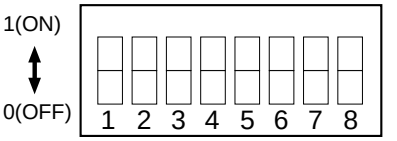
Setting of S-BUS ID No.

S12 (S-BUS ID No.)

Set the station address for the unit on the standard S-BUS data link.

Note

Set to numbers other than 0, 1 and 255.

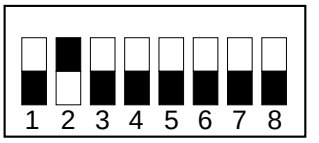


(1 2 4 8 16 32 64 128)

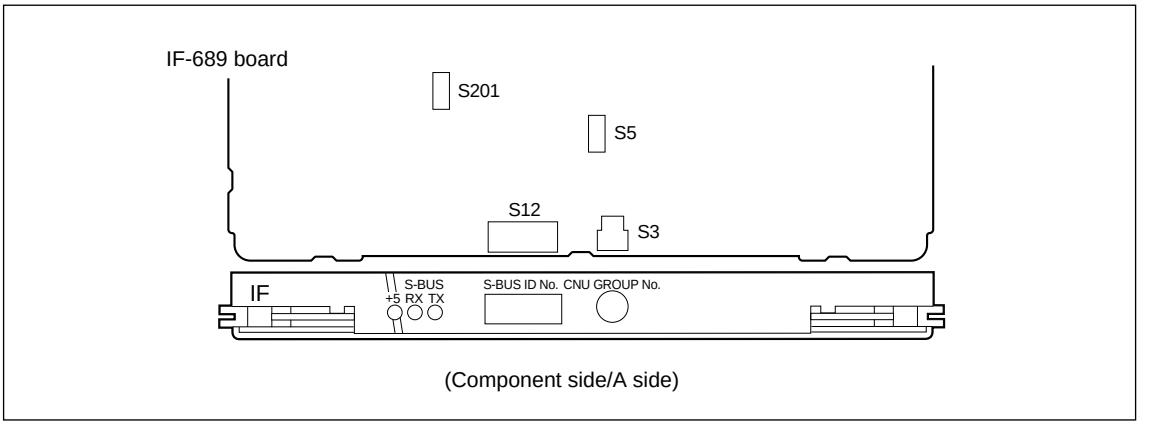
Setting example
S-BUS ID No.

3:	1	1	0	0	0	0	0	0
64:	0	0	0	0	0	0	1	0

Factory default setting: 2



(■ indicates the switch lever position)



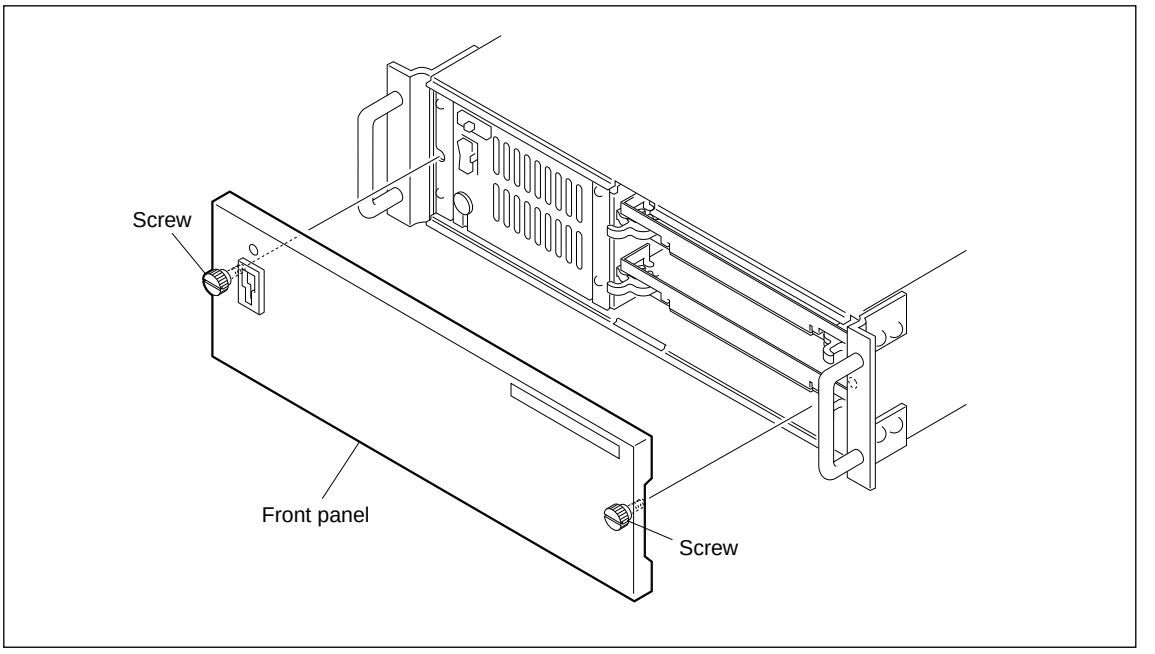
1-5. Installation

1-5-1. Installing the IF-689 Board

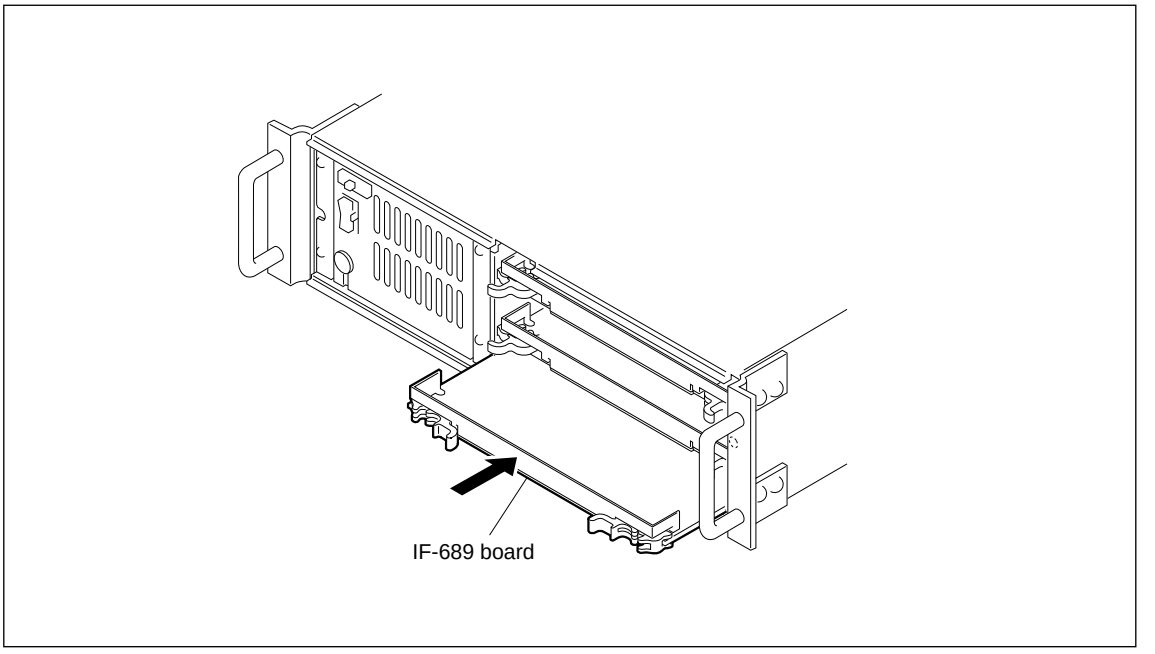
Note

The unit is equipped with shielding springs which have sharp edges. Do not touch them with bare hands. Pay careful attention when servicing.

1. Loosen the two screws and remove the front panel of the CNU-700.



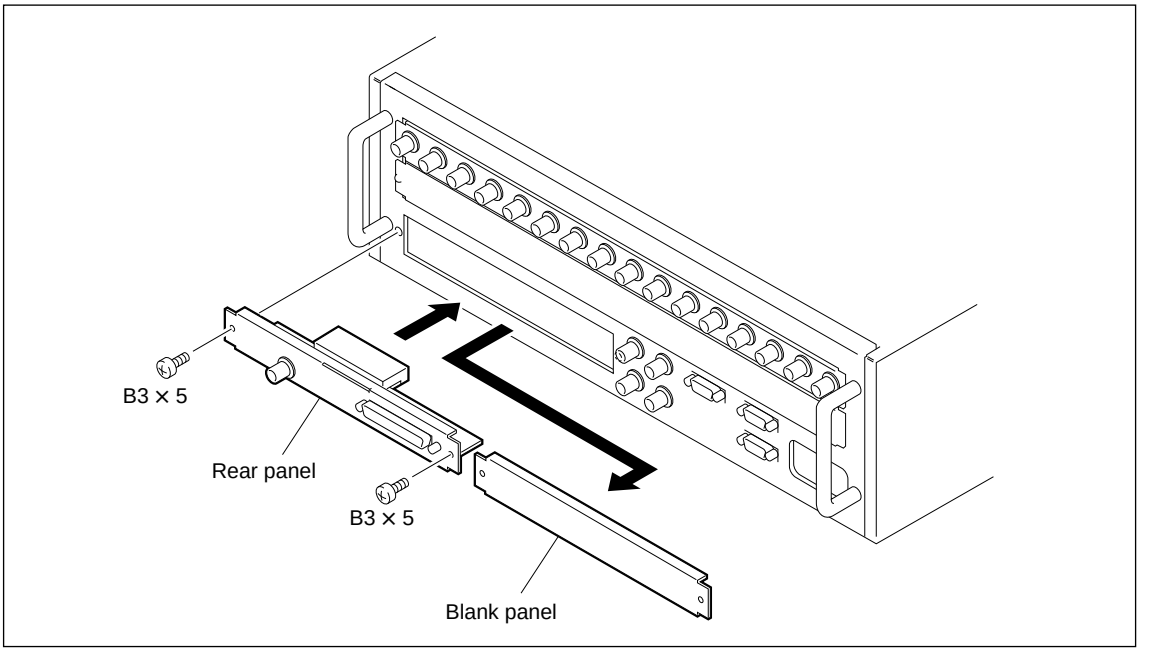
2. Insert the IF-689 board in the fourth slot from the top.



3. Attach the front panel to its original position.

1-5-2. Installing the Rear Panel

1. Remove the two screws and remove the blank panel.
2. Install the rear panel with the two screws instead of the blank panel.



1-6. Connection

1-6-1. Connection Connector/Cable

Connection made with the connector panel during installation or service, should be made with the connectors/complete assemblies specified in the following list, or equivalent parts.

Connector Name	Connection Connectors	Conection Cable
REMOTE S-BUS	BNC(75 Ω) 1-569-370-12	BELDEN 8281 *1
I/O PORT	D-sub 50P, Male 1-566-358-11*2 D-sub for connector metal plating shell 50P 1-563-379-11	

*1: The BNC connector (T bridge) is available to connect the BELDEN 8281 cables.
BNC connector (T bridge): 1-764-805-11

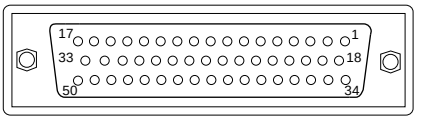
*2: The plug needs the following solderless contacts.
AWG#18 to #22: 1-566-493-21
AWG#22 to #24: 1-564-774-11
AWG#24 to #30: 1-564-775-11

1-6-2. Connector Input/Output Signals

REMOTE S-BUS

BNC 75 Ω, 1.0 Vp-p

I/O PORT (D-sub 50P, Female)



(External view)

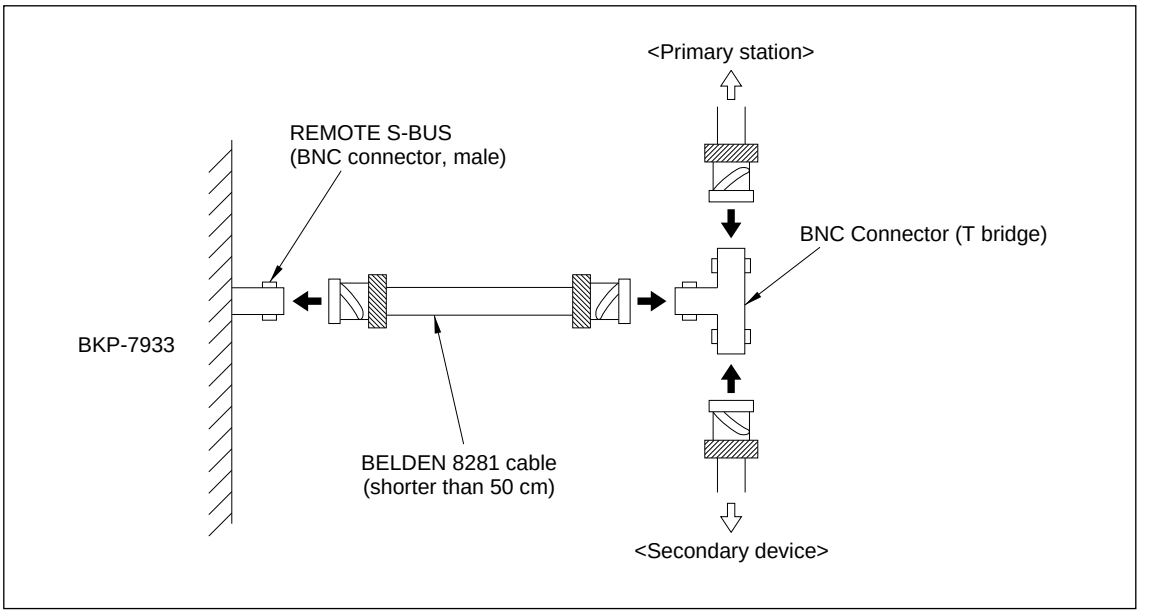
Pin No.	I/O	Specifications
1	IN/OUT	EXTO 0
2	IN/OUT	EXTO 3
3	IN/OUT	EXTO 6
4	IN	EXTI 1
5	IN	EXTI 4
6	IN	EXTI 7
7	—	NC
8	—	NC
9	OUT	EXT-AN 0
10	OUT	EXT-AN 3
11	OUT	EXT-AN 6
12	—	NC
13	—	NC
14	—	NC
15	OUT	+28V
16	OUT	+28V
17	—	SPARE
18	IN/OUT	EXTO 1
19	IN/OUT	EXTO 4
20	IN/OUT	EXTO 7
21	IN	EXTI 2
22	IN	EXTI 5
23	—	NC
24	—	NC
25	—	NC

Pin No.	I/O	Specifications
26	OUT	EXT-AN 1
27	OUT	EXT-AN 4
28	OUT	EXT-AN 7
29	—	NC
30	—	NC
31	OUT	+5V
32	—	GND (+5V)
33	—	GND (+28V)
34	IN/OUT	EXTO 2
35	IN/OUT	EXTO 5
36	IN	EXTI 0
37	IN	EXTI 3
38	IN	EXTI 6
39	—	NC
40	—	NC
41	—	NC
42	OUT	EXT-AN 2
43	OUT	EXT-AN 5
44	—	NC
45	—	NC
46	—	NC
47	OUT	+5V
48	—	GND (+5V)
49	—	GND (+28V)
50	—	SPARE

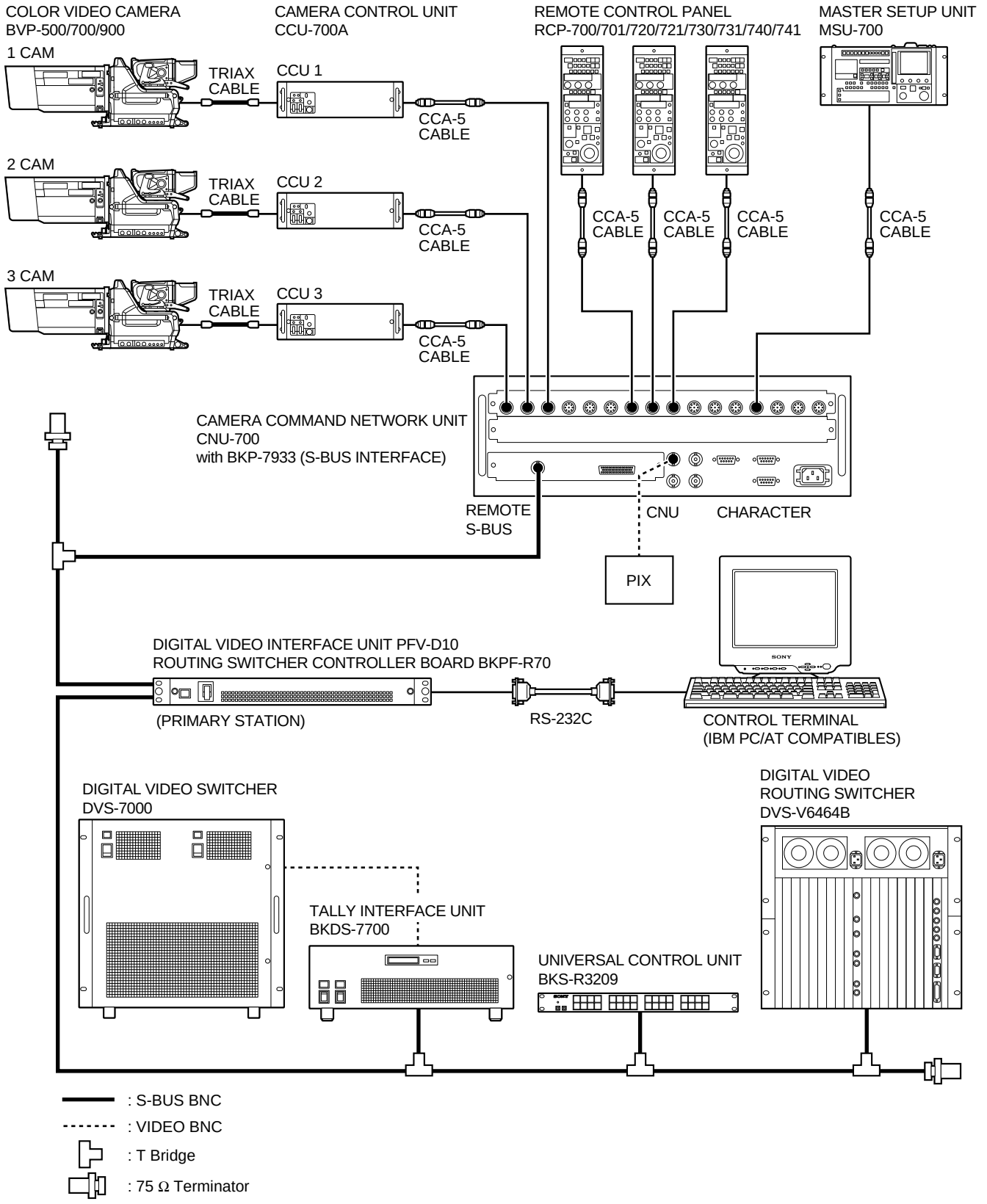
1-6-3. Notes on Connection

To connect the devices to the S-BUS line, refer to Section 1-6-4 and following precautions.

- The cable length of one S-BUS line is a maximum of 500 m (when a BELDEN 8281 or the equivalent is used).
- Be sure to terminate the BNC connector (T bridge) attached to the last machine of the S-BUS line with a 75 Ω terminator.



1-6-4. Instance of System Configuration



1-7. Setting Up

Note

The description in this section assumes that the BKPF-R70 is used as the primary station.

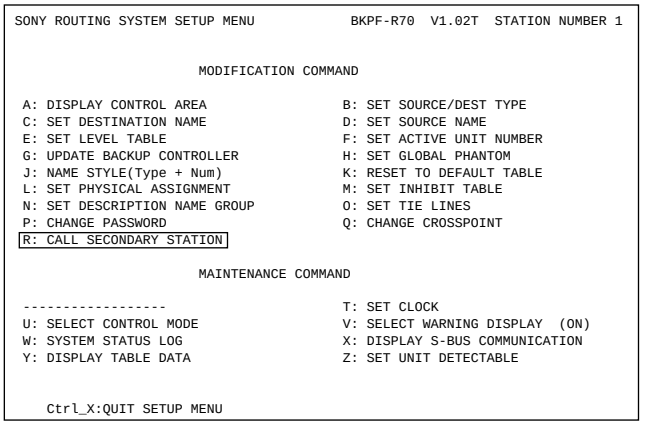
1-7-1. Outline

Calling the Menu Display of the Secondary Station

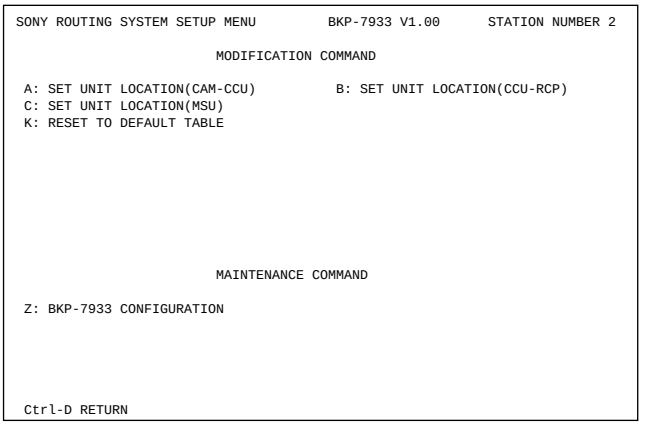
First, call the menu display of the secondary station that is connected to the S-BUS of the primary station.

Procedure

1. Call the SETUP MENU of the primary station by pressing Ctrl - X.
   Then, select the menu item “R:CALL SECONDARY STATION” and press ENTER.



2. When the message “CALL STATION NUMBER?” appears, input the S-BUS ID number of the BKP-7933 using the numeric keys and press ENTER. The display changes to the called BKP-7933 menu display.



Notes

- If the specified BKP-7933 does not exist on the S-BUS data link, an error is displayed.
  Display: “Station does not exist”
- If the specified BKP-7933 is outside the communication target, an error is displayed.
  Check using the menu item “F:SET ACTIVE UNIT NUMBER”.
  Display: “Disable Station”

Saving the Setup Data

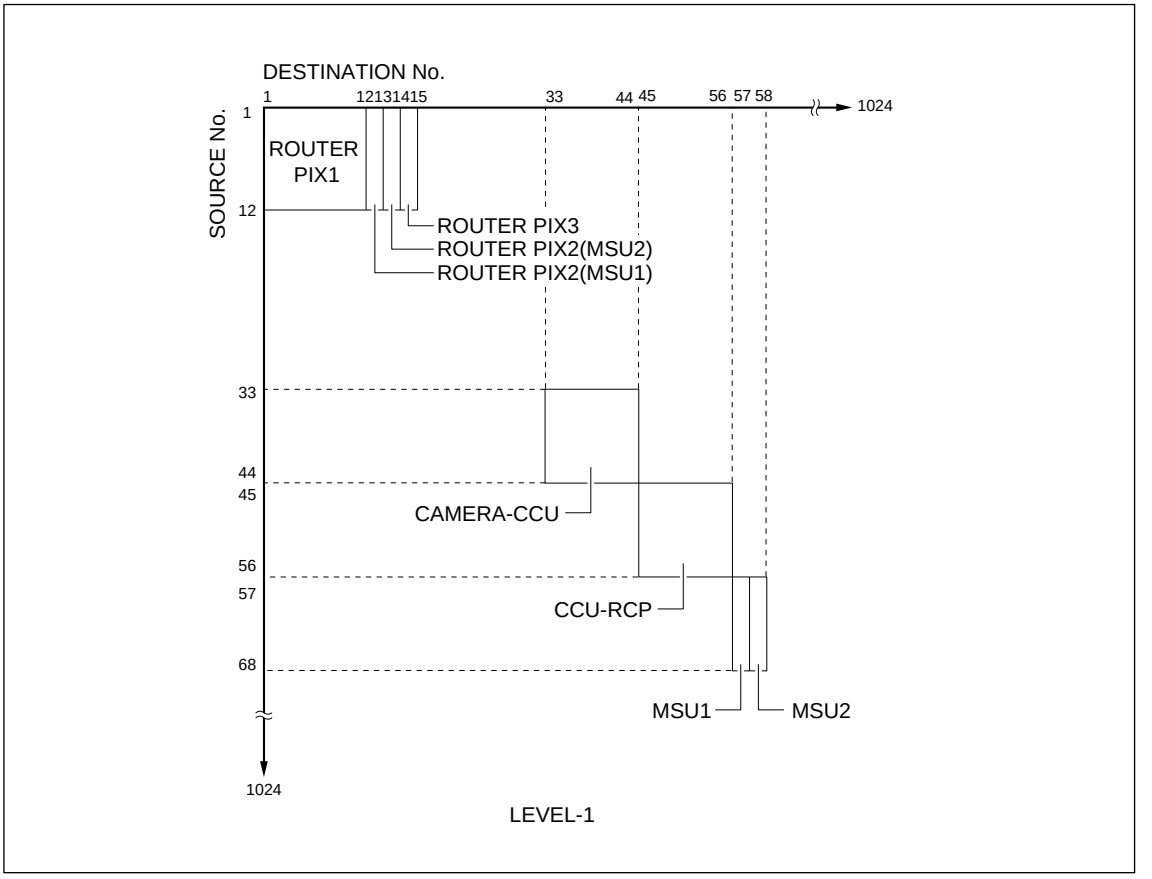
Press Ctrl - E to validate and save the setup data and to return to the BKP-7933 menu display.
Press Ctrl - D to return to the BKP-7933 menu display without saving the setup data.

Level Mapping

The level of the routing system can be set in this system. Refer to the installation manual (for system setup) that is supplied with the routing switcher system for an overview of level mapping.

Notes on Setting Up

- Perform the setup for the camera numbers that are actually connected. If setup is performed for camera numbers that are not actually connected, the response speed of the routing switcher may be slowed and the normal function may be hindered. Be sure to set 0 for the camera numbers that are not actually connected.
- When setting up the MODIFICATION COMMAND and the MAINTENANCE COMMAND, do not duplicate the SOURCE No. and the DESTINATION No. when their level settings are the same. If a number is duplicated, the LEVEL No. is automatically set to 0 and the setup is invalidated. The command assignments when shipped from the factory are shown below for reference.



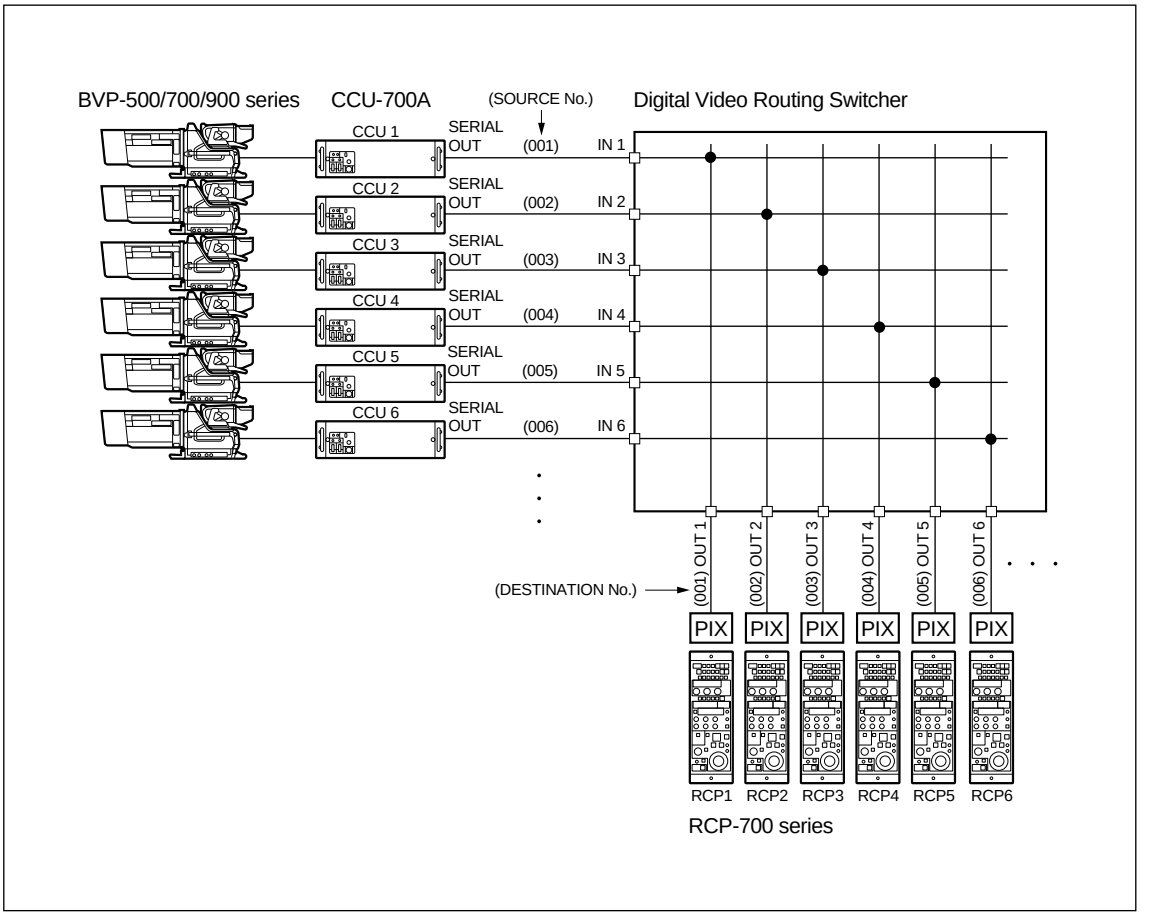
1-7-2. Linking the RCP Assignment and VE Monitor Selection

Description of Operation

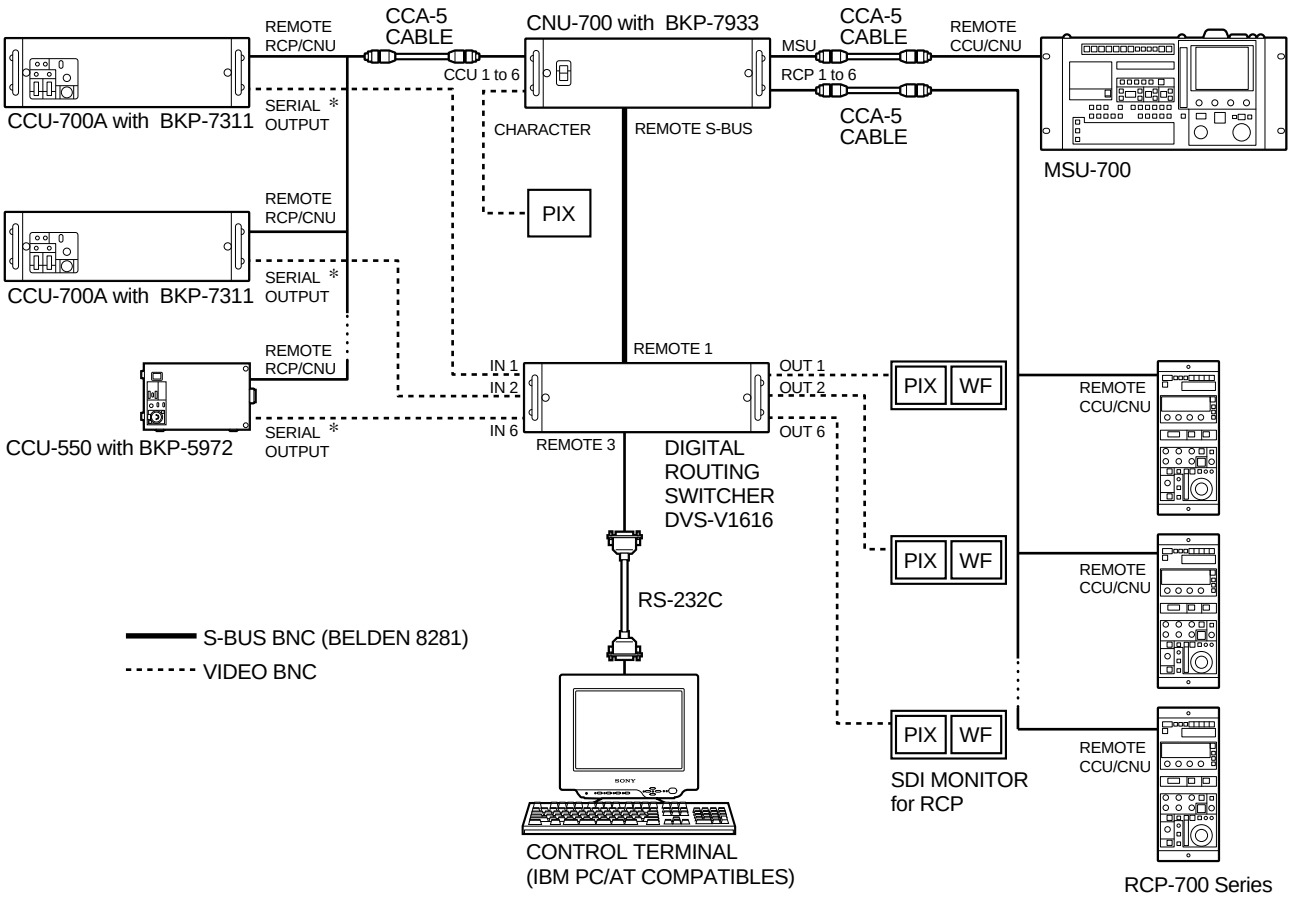
Set the menu as follows when you want to link the RCP assignment with the VE monitor selection. If this setting is executed, by changing the RCP assignment on the MSU side, the VE monitor that corresponds to the RCP is automatically switched at the same time.
(Example) When the camera that is controlled by RCP1 is changed from CAM1 to CAM5, the video signal on the VE monitor in front of RCP1 is switched at the same time from CAM1 to CAM5.

Note

The contents that are set on this menu are reflected to the “Setting status of the control system” of the CNU-700 character display.



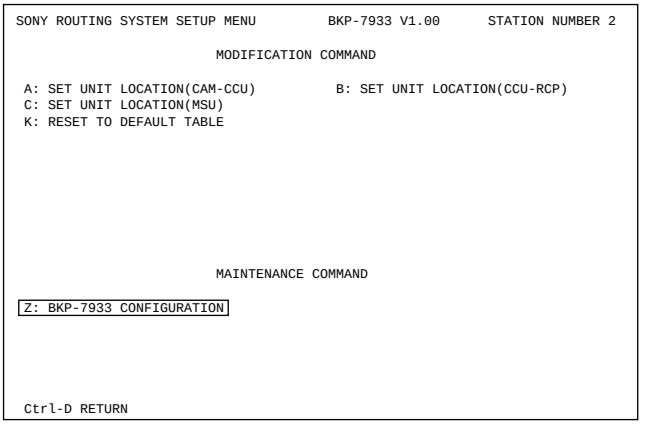
Connecting Peripheral Equipment



* If using the ANALOG ROUTING SWITCHER (BVS-V3232 etc.), connect it to PIX or WF connector (PIX 1 or WF 1 connector for the CCU-700A series)

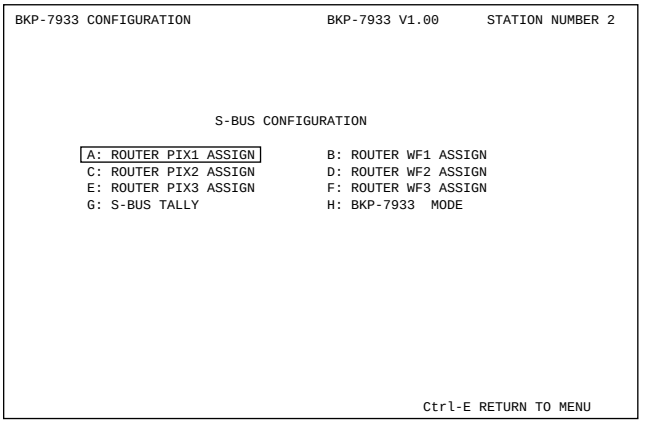
Setting from the S-BUS Primary Station

1. Select the menu item “Z:BKP-7933 CONFIGURATION” and press ENTER.

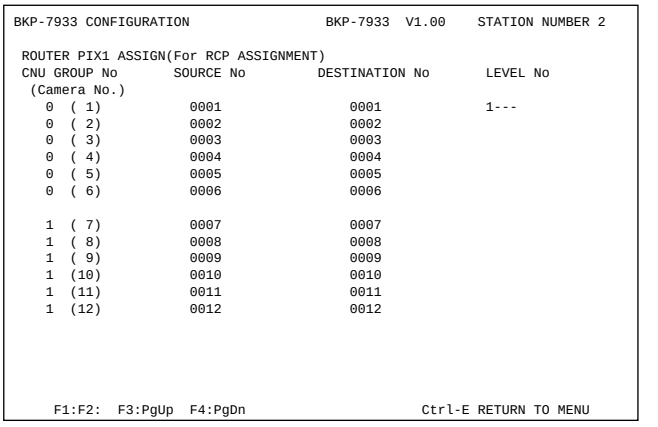


2. Select either “A:ROUTER PIX1 ASSIGN” or “B:ROUTER WF1 ASSIGN” using the cursor key and press ENTER. (The illustration shows the display that selects “A:ROUTER PIX1 ASSIGN”.)

3. Move the cursor key to the desired position to be changed and press ENTER. (The display enters the input mode.)



4. Input the SOURCE No., DESTINATION No. and LEVEL No. using the numeric keys and press ENTER. (The illustration shows the display that selects “A:ROUTER PIX1 ASSIGN”.)



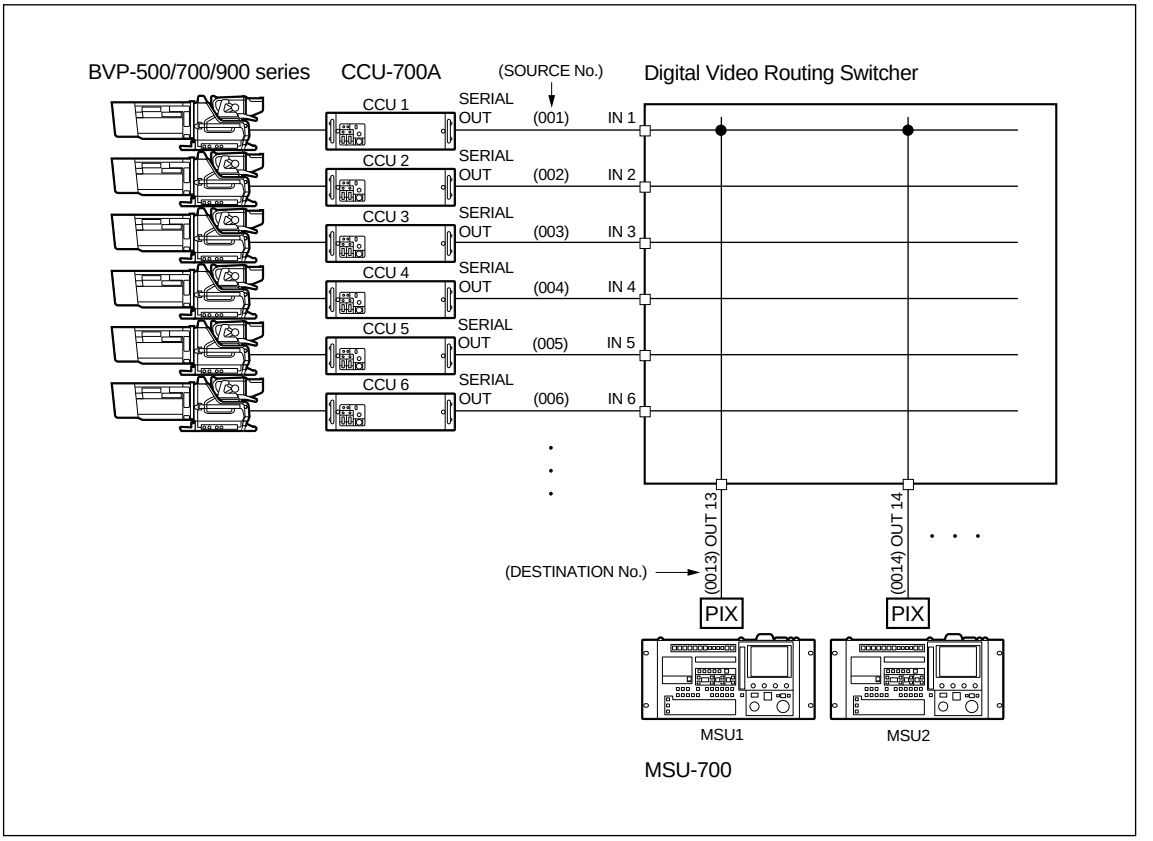
Notes

- Any number in the range of 1 to 1024 can be selected and set to the SOURCE No. and DESTINATION No. without being consecutive.
- LEVEL No. can be freely set, but it cannot be set for each camera number.

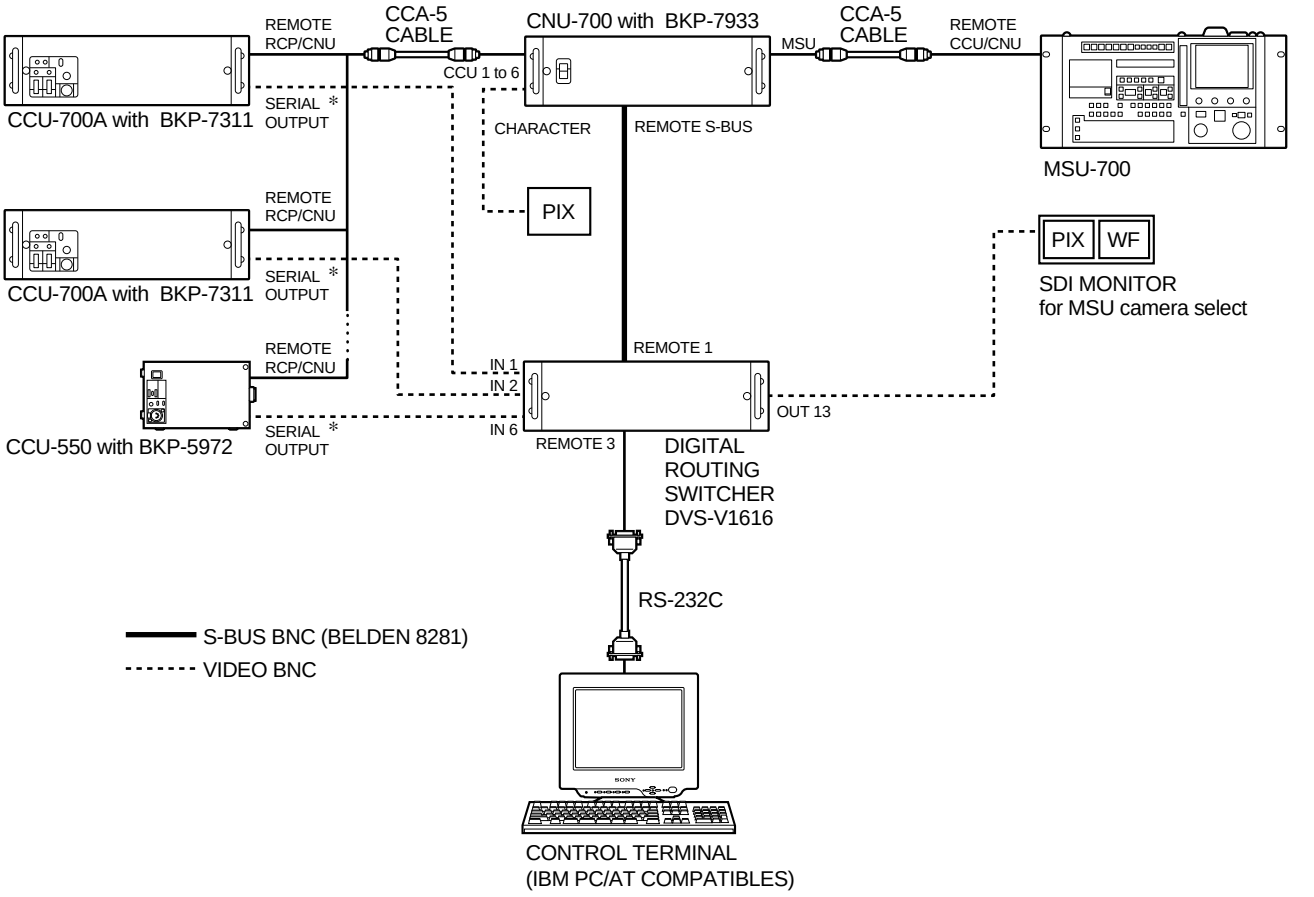
1-7-3. Linking the MSU Camera Selection and the VE Monitor Selection

Description of Operation

Set the menu as follows when you want to link the MSU camera selection with the VE monitor selection. If this setting is executed, when the MSU camera select button is pressed, the video signal of the selected camera can be output to the VE monitor. This function is useful especially when the SDI signal is switched.



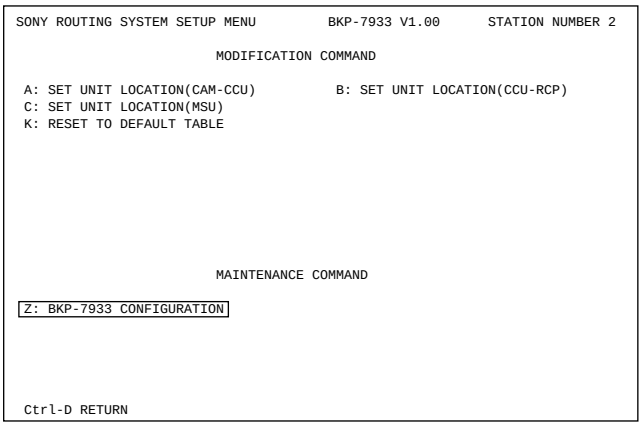
Connecting Peripheral Equipment



* If using the ANALOG ROUTING SWITCHER (BVS-V3232 etc.), connect it to PIX or WF connector (PIX 2 or WF 2 connector for the CCU-700A series)

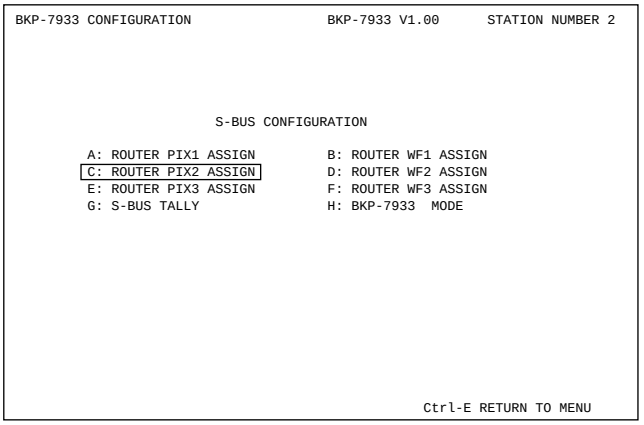
Setting from the S-BUS Primary Station

1. Select the menu item “Z:BKP-7933 CONFIGURATION” and press ENTER.

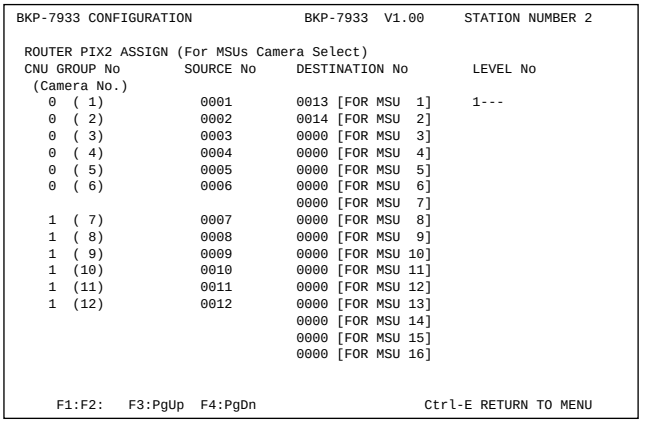


2. Select either “C:ROUTER PIX2 ASSIGN” or “D:ROUTER WF2 ASSIGN” using the cursor key and press ENTER. (The illustration shows the display that selects “C:ROUTER PIX2 ASSIGN”.)

3. Move the cursor key to the desired position to be changed and press ENTER. (The display enters the input mode.)



4. Input the SOURCE No., DESTINATION No. and LEVEL No. using the numeric keys and press ENTER. (The illustration shows the display that selects “C:ROUTER PIX2 ASSIGN”.)



Notes

- Any number in the range of 1 to 1024 can be selected and set to the SOURCE No. and DESTINATION No. without being consecutive.
- LEVEL No. can be freely set, but it cannot be set for each camera number.

1-7-4. Switching the Video on the Preview Monitor with the RCP PREVIEW Switch

Note

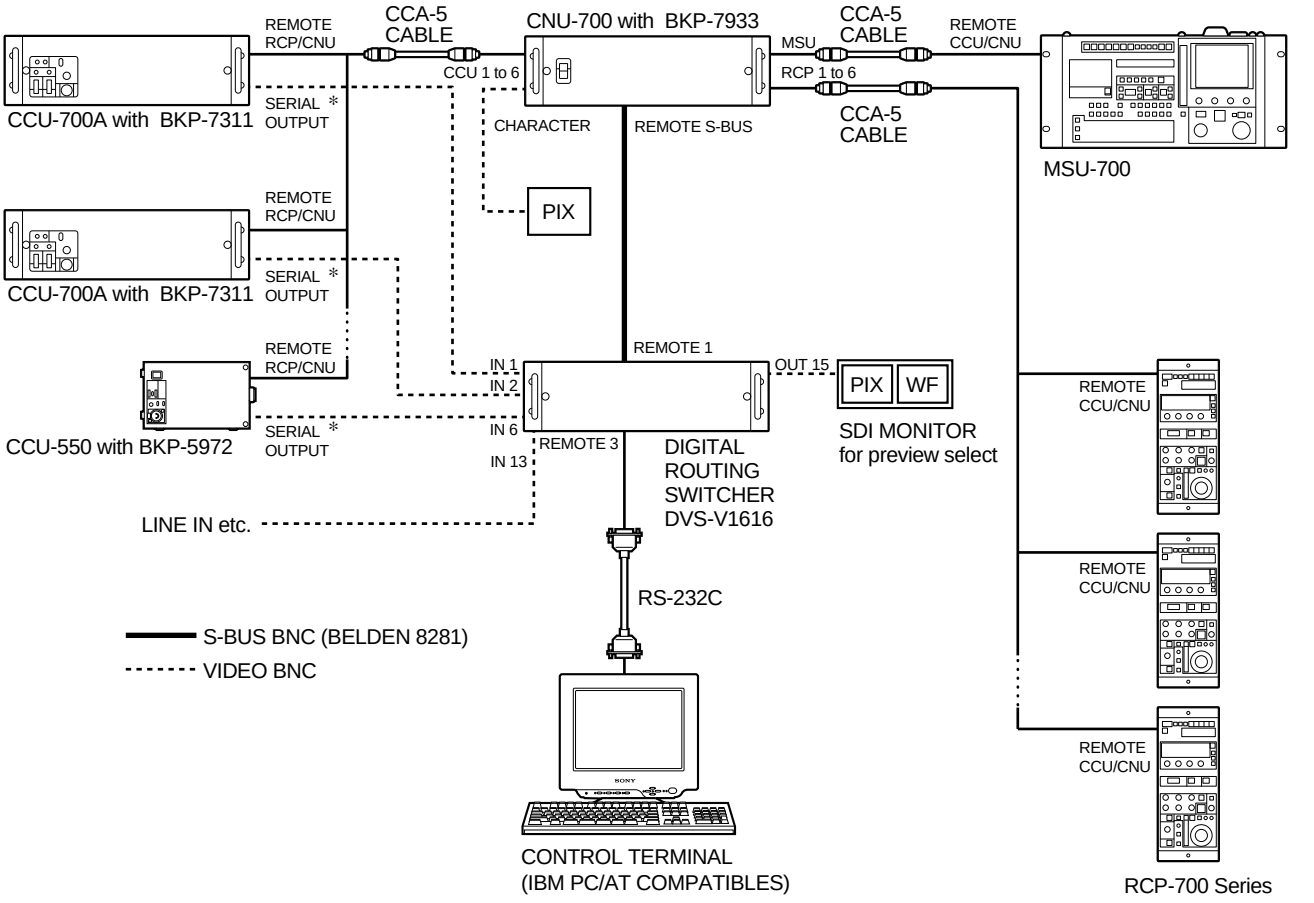
RCP must be modified in order to use this function. Refer to Section 1-9, “Modification of RCP” for details.

Description of Operation

Set the menu as follows when you want to switch the video on the preview monitor with the RCP PREVIEW switch.

The signal (LINE IN signal or on-air video signal) that is selected as the master source, is output normally to the preview monitor. If this setting is executed, the video signal of any camera can be selected when the RCP PREVIEW switch is pressed. This selection can be independently operated without linking with MSU or VCS. (Linked operation becomes possible by setting the mode.)

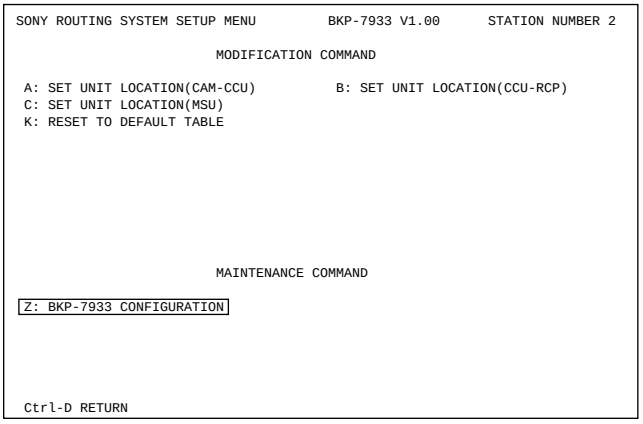
Connecting Peripheral Equipment



* If using the ANALOG ROUTING SWITCHER (BVS-V3232 etc.), connect it to PIX, WF or VBS connector

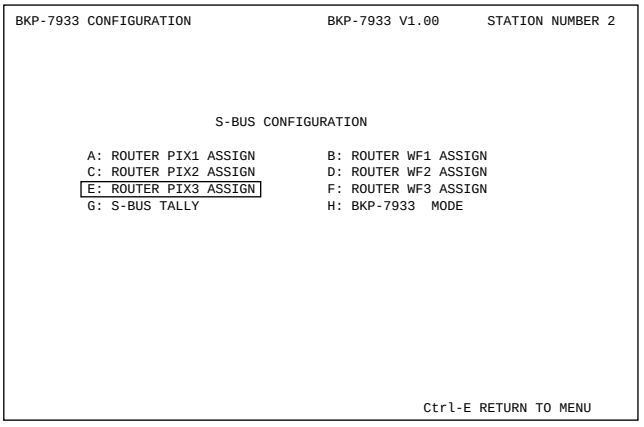
Setting from the S-BUS Primary Station

1. Select the menu item “Z:BKP-7933 CONFIGURATION” and press ENTER.

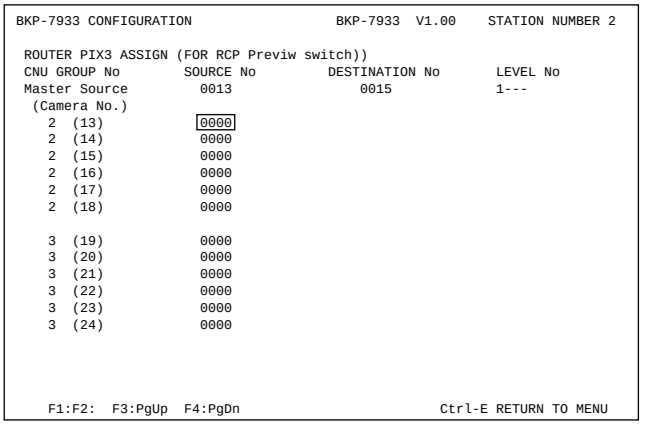


2. Select either “E:ROUTER PIX3 ASSIGN” or “F:ROUTER WF3 ASSIGN” using the cursor key and press ENTER. (The illustration shows the display that selects “E:ROUTER PIX3 ASSIGN”.)

3. Move the cursor key to the desired position to be changed and press ENTER. (The display enters the input mode.)



4. Input the SOURCE No. of the master source and each camera, DESTINATION No. and LEVEL No. using the numeric keys and press ENTER. (The illustration shows the display that selects “E:ROUTER PIX3 ASSIGN”.)

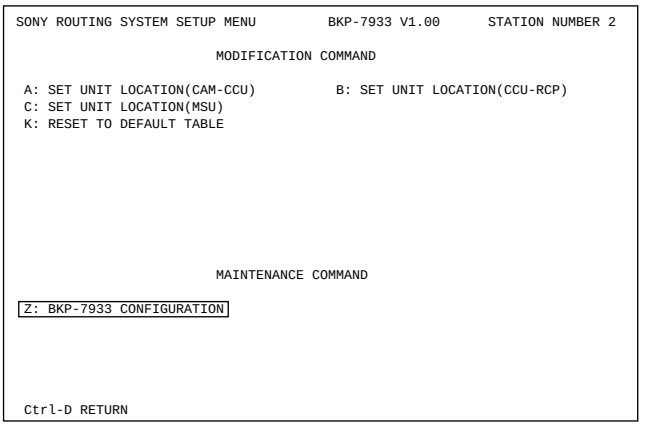


Notes

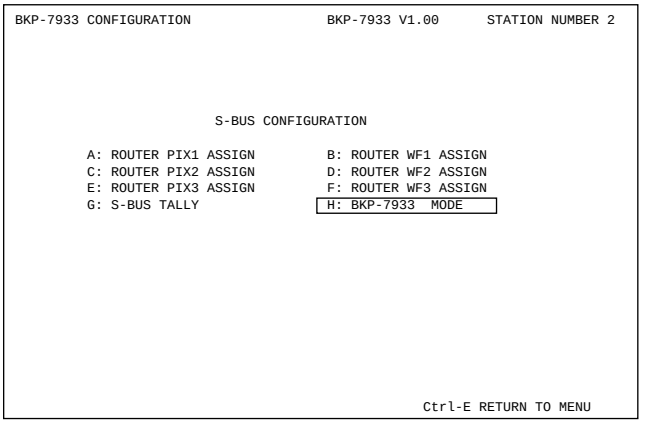
- Any number in the range of 1 to 1024 can be selected and set to the SOURCE No. and DESTINATION No. without being consecutive.
- LEVEL No. can be freely set, but it cannot be set for each camera number.

Linking the Preview Monitor Selection with MSU and VCS

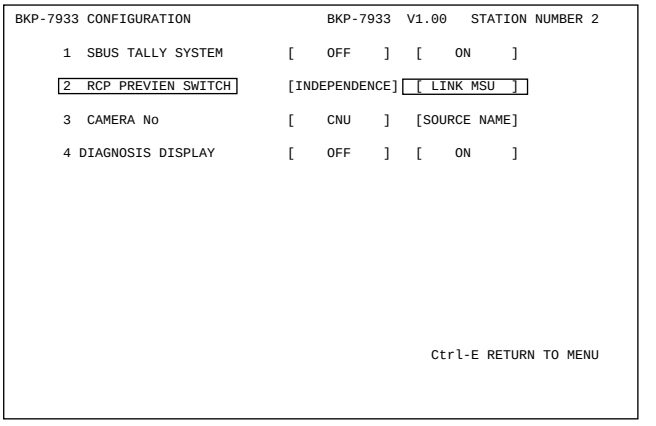
1. Select the menu item “Z:BKP-7933 CONFIGURATION” and press ENTER.



2. Select the menu item “H:BKP-7933 MODE” and press ENTER.



3. Move the cursor key to the “LINK MSU” of “2 RCP PREVIEW SWITCH” and press ENTER.

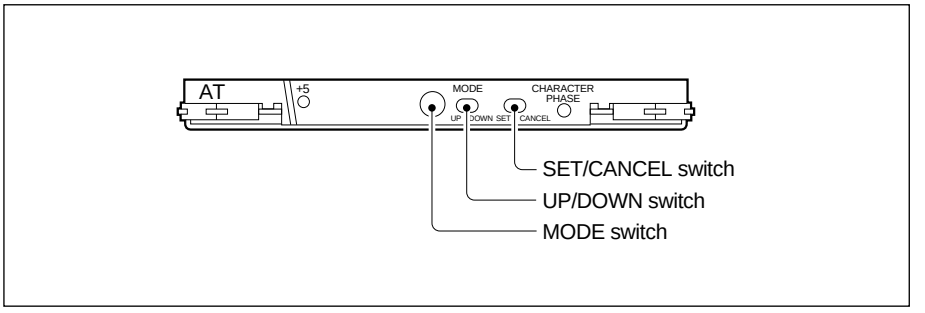


Notes when LINK MSU is selected

- It is linked to the MSU only that is connected to CNU-700 in which the BKP-7933 is installed. (It is not linked with the MSU that is connected to the CNU IF board BKP-7930, nor with the MSU that is connected to the CNU-700 in which the BKP-7933 is not installed.)
- The RCP that is connected to the CNU-700 only is validated.

Changing the Operation Mode of the RCP PREVIEW Switch

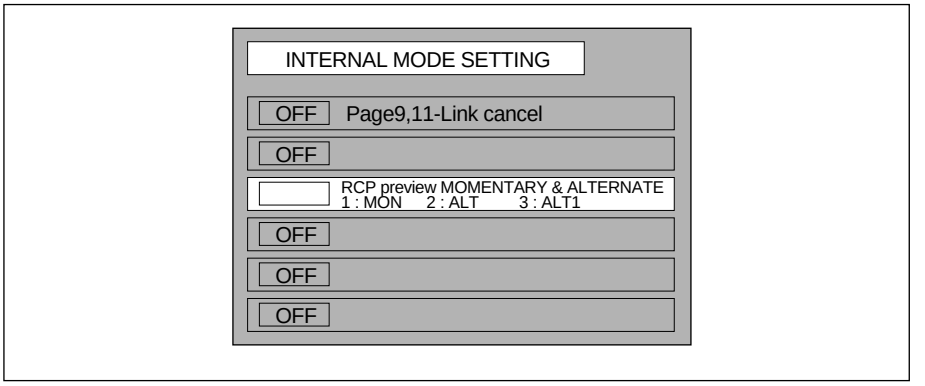
The operation mode of the RCP PREVIEW switch can be changed on the CNU-700 character display. Use the switches on the AT board inside the CNU-700 for this setting.



1. Set the MODE switch to 5.
   The message “INTERNAL MODE SETTING” appears on the character monitor display.

2. Set the SET/CANCEL switch to the SET position. The INTERNAL MODE SETTING display appears.

3. Select “RCP preview MOMENTARY & ALTERNATE” with the UP/DOWN switch. Set the SET/CANCEL switch to the SET position.



4. Select the desired operation mode (MON/ALT/ALT1) with the UP/DOWN switch. Set the SET/CANCEL switch to the SET position. Each operation mode is described below.
   MON: The preview display appears only while the RCP PREVIEW switch is being pressed.
   ALT: The preview display appears when the RCP PREVIEW switch is pressed once, and disappears when it is pressed again.
   ALT1: The preview display appears when the RCP PREVIEW switch is pressed once but cannot be turned off.
   (If the PREVIEW switch is turned on from another RCP, the preview display can be switched.)

5. Set the MODE switch to 0.

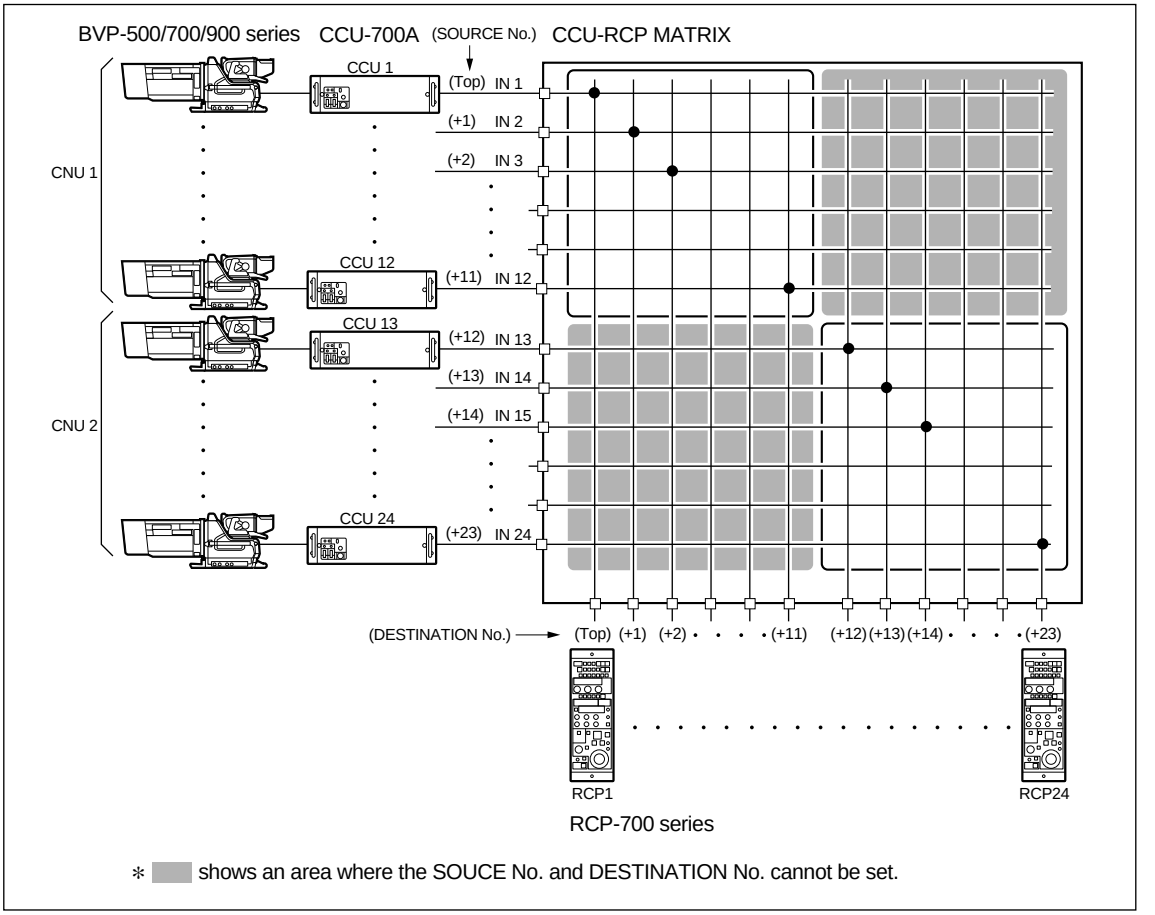
1-7-5. Executing RCP Assignment from Equipment Other Than MSU

Description of Operation

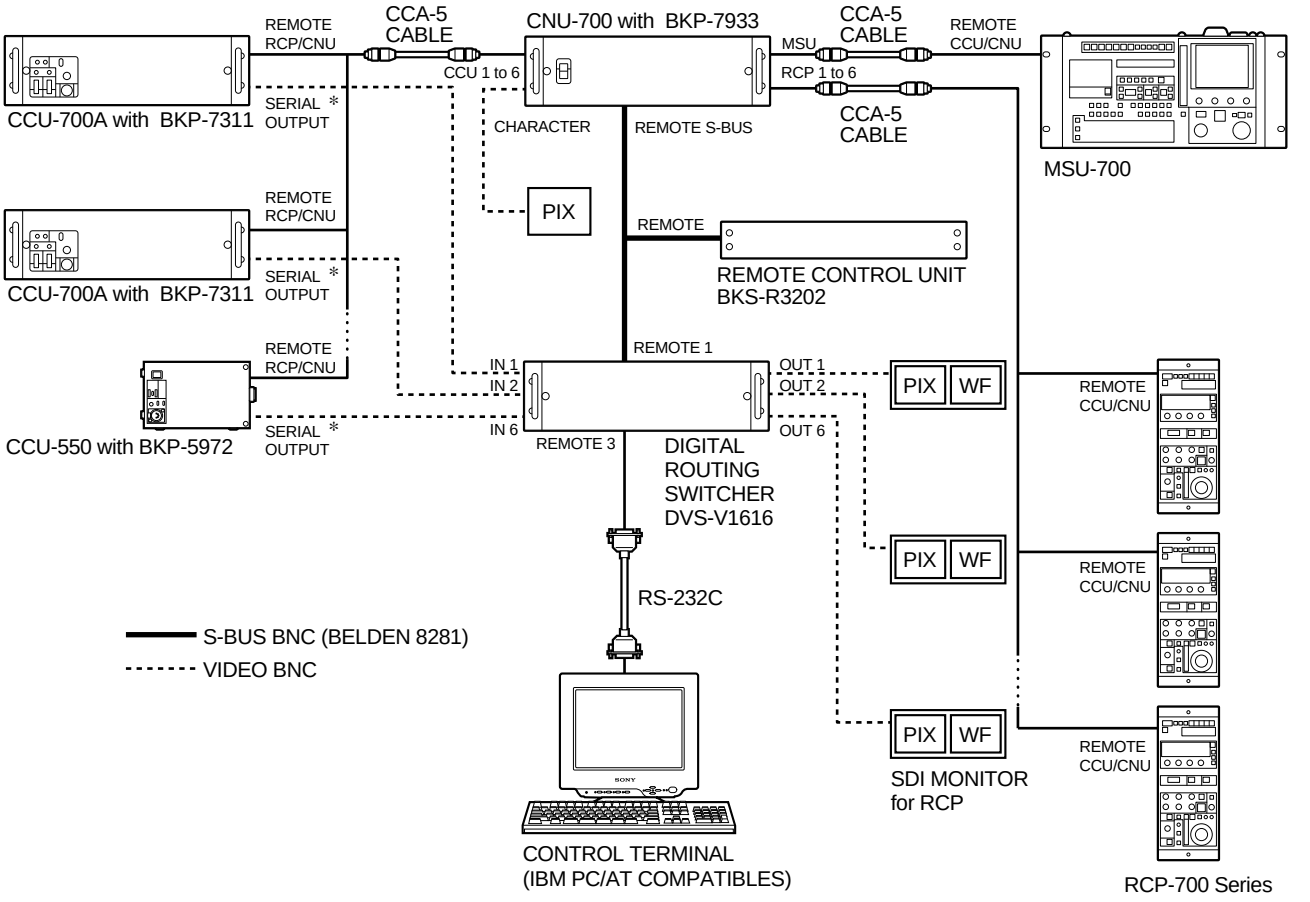
Set the menu as follows when you want to execute RCP assignment from equipment other than MSU. When this setting is executed, a maximum of 96 × 96 CCU-RCP matrix can be set in the matrix space of the S-BUS. The RCP assignment can be set from a remote control unit such as BKS-R3202. (However, setting cannot be made across two or more CNUs.) The setup data of the RCP assignment that is made here is saved in the BKP-7933 side.)

Note

- The contents of the settings that are made using this menu are reflected in the “Setting status of the control system” of the CNU-700 character display.



Connecting Peripheral Equipment

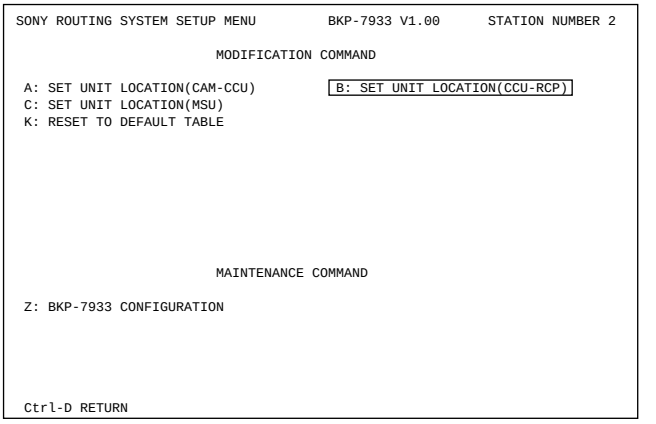


* If using the ANALOG ROUTING SWITCHER (BVS-V3232 etc.), connect it to PIX, WF or VBS connector

Setting from the S-BUS Primary Station

1. Select the menu item “B:SET UNIT LOCATION (CCU-RCP)” and press ENTER.

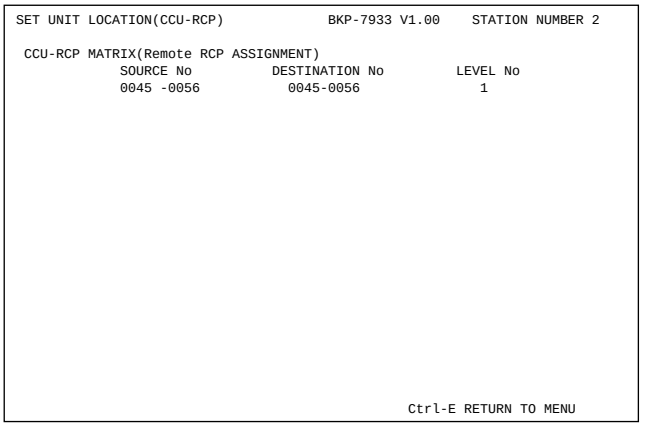
2. Move the cursor key to the desired position to be changed and press ENTER. (The display enters the input mode.)



3. Input the SOURCE No., DESTINATION No. and LEVEL No. using the numeric keys and press ENTER.

Notes

- Up to 96 in the range of 1 to 1024 can be selected and set to the SOURCE No. and DESTINATION No., but the numbers must be consecutive.
- Any number in the range of 1 to 8 can be set to the LEVEL No. This setting can be assigned to the respective level and can be mapped.

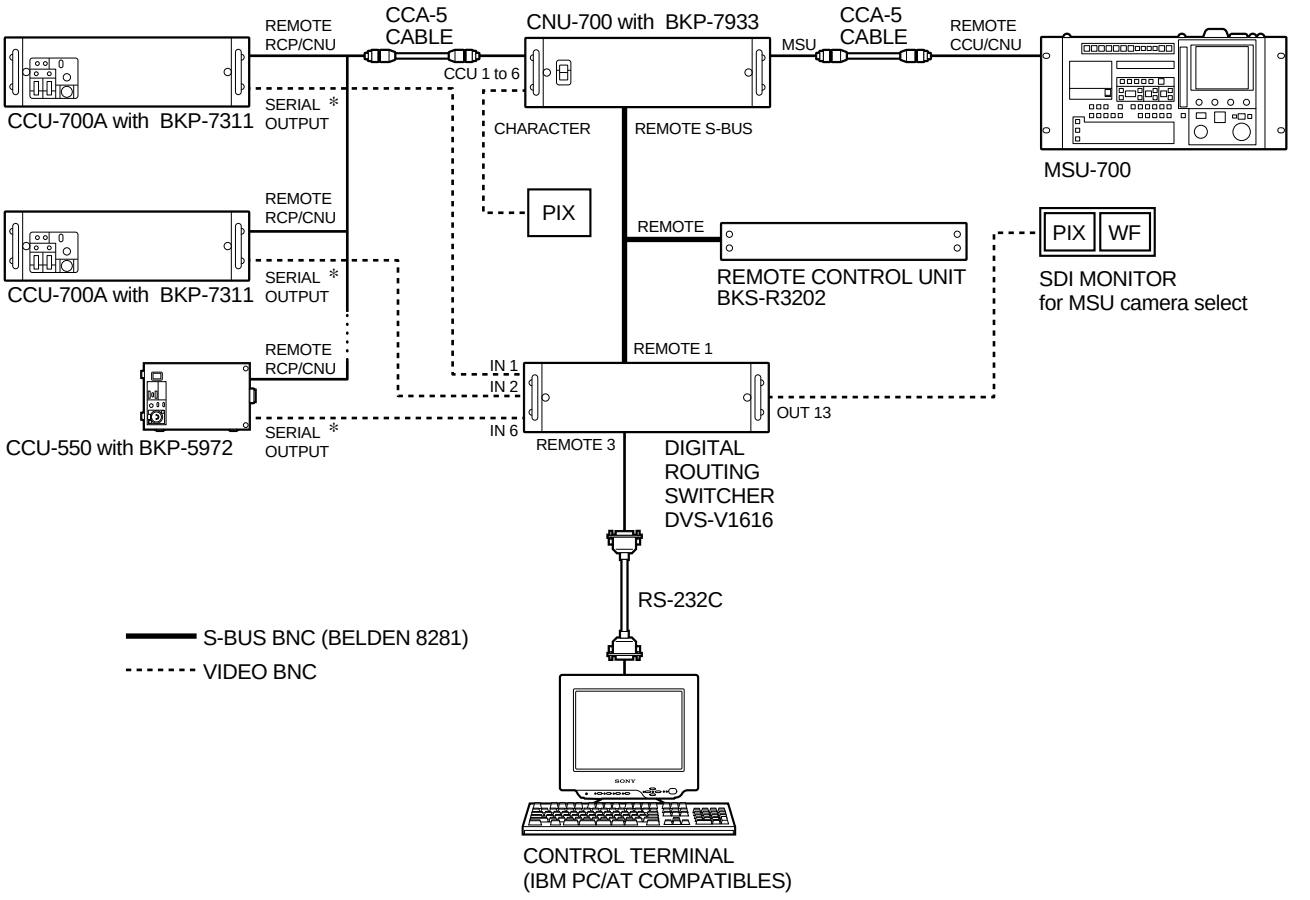


1-7-6. Switching the MSU Camera Selection Externally

Description of Operation

Set the menu as follows when you want to switch the MSU camera selection from a remote location.
When this setting is executed, each one of up to 16 MSUs can be specified to control a certain camera.

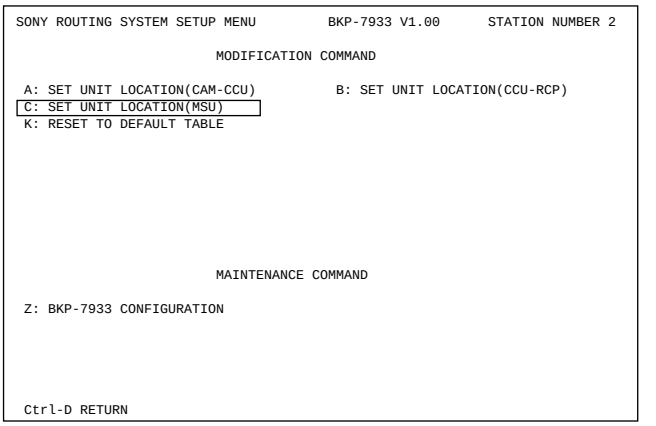
Connecting Peripheral Equipment



* If using the ANALOG ROUTING SWITCHER (BVS-V3232 etc.), connect it to PIX, WF or VBS connector

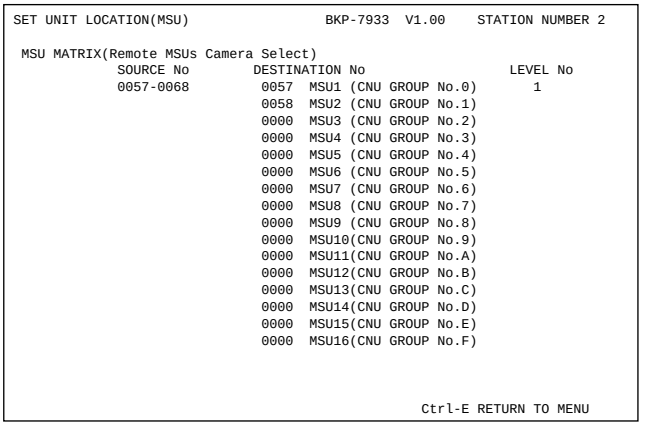
Setting from the S-BUS Primary Station

1. Select the menu item “C:SET UNIT LOCATION (MSU)” and press ENTER.



2. Move the cursor key to the desired position to be changed and press ENTER. (The display enters the input mode.)

3. Input the SOURCE No., DESTINATION No. and LEVEL No. using the numeric keys and press ENTER.



Notes

- Any number in the range of 1 to 1024 can be set to the SOURCE No. and the DESTINATION No. UP to 96 of the SOURCE No. (maximum number of cameras) and up to 16 of the DESTINATION No. (maximum number of MSUs) can be selected.
- Any number in the range of 1 to 8 can be set to the LEVEL No. This setting can be assigned to the respective level and can be mapped.

1-7-7. Changing the Camera Assignment Virtually

Description of Operation

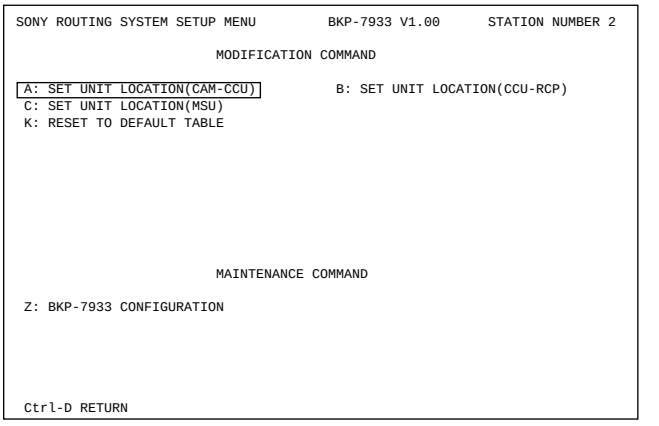
Set the menu as follows when you want to change the camera assignment virtually. When this setting is executed, the camera assignment can be changed virtually without changing the cable connection between the cameras and CCUs. However, the tally numbers and the MSU camera select numbers cannot be changed.

Note

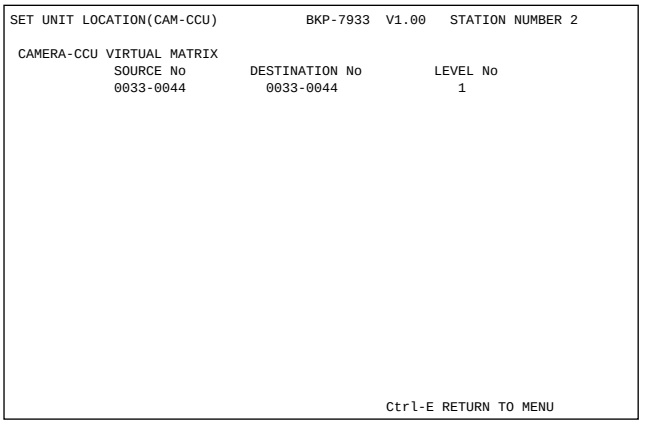
When the SOURCE NAME is set for each camera number, the name can be output to the CNU character displays (from page 2 to page 11) of the CNU-700 with BKP-7933 installed.

Setting from the S-BUS Primary Station

1. Select the menu item “A:SET UNIT LOCATION (CAM-CCU)” and press ENTER.
2. Move the cursor key to the desired position to be changed and press ENTER. (The display enters the input mode.)



3. Input the SOURCE No., DESTINATION No. and LEVEL No. using the numeric keys and press ENTER.

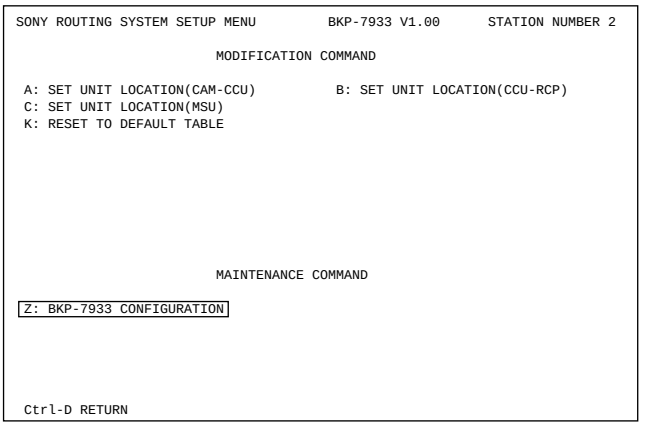


Notes

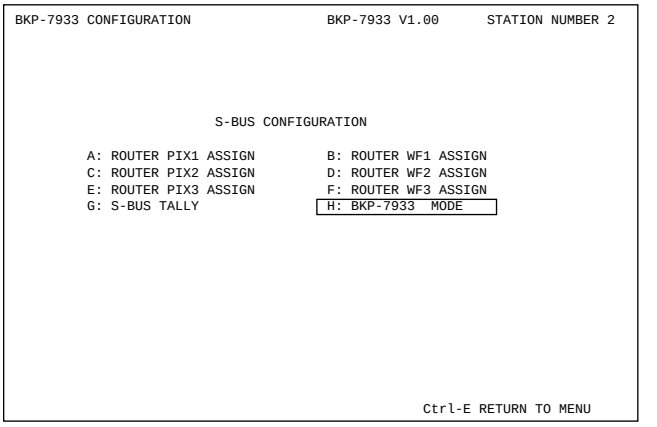
- Up to 96 in the range of 1 to 1024 can be selected and set to the SOURCE No. and the DESTINATION No., but the numbers must be consecutive.
- Any number in the range of 1 to 8 can be set to the LEVEL No. This setting can be assigned to the respective level and can be mapped.

Displaying the SOURCE NAME on the CNU Character Display

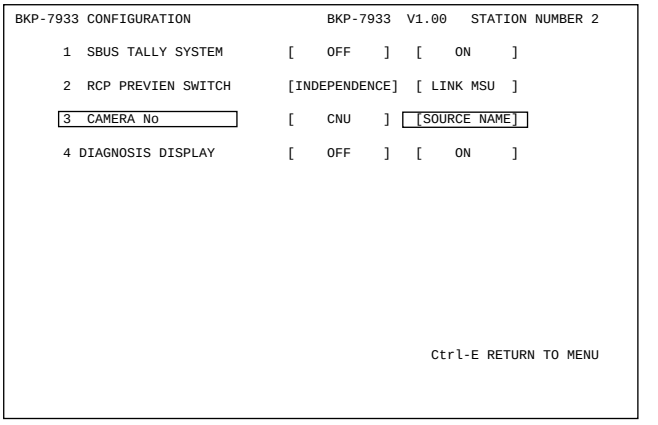
1. Select the menu item “Z:BKP-7933 CONFIGURATION” and press ENTER.



2. Select “H: BKP-7933 MODE” using the cursor key and press ENTER.



3. Select “SOURCE NAME” of “3 CAMERA No” with the cursor key and press ENTER.



1-7-8. Using the Tally System

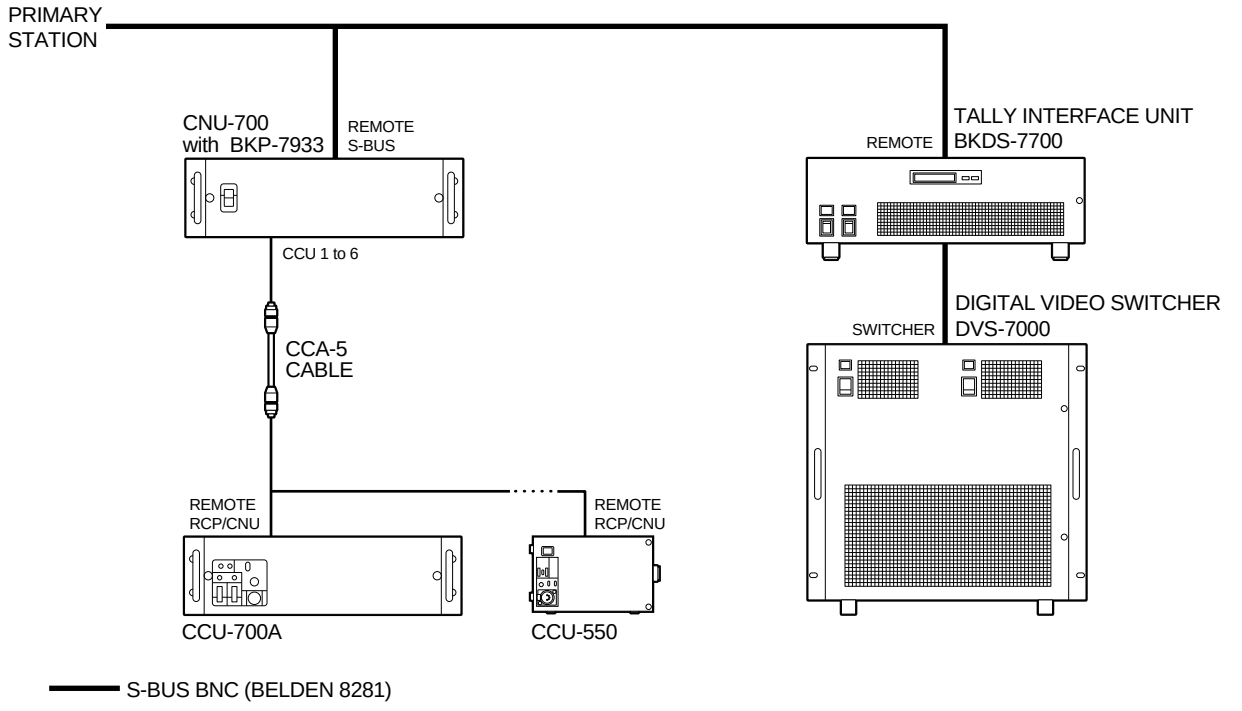
Description of Operation

Set the menu as follows when you want to construct a tally system using the S-BUS. When this setting is executed, the red tally and the green tally signals are accepted through the S-BUS and are output to the corresponding CCU and camera in the form of command signals. Do not connect any cable to the TALLY connector of the CCU. However, be careful when using the tally system as the response speed of the tally system may become slower.

Notes

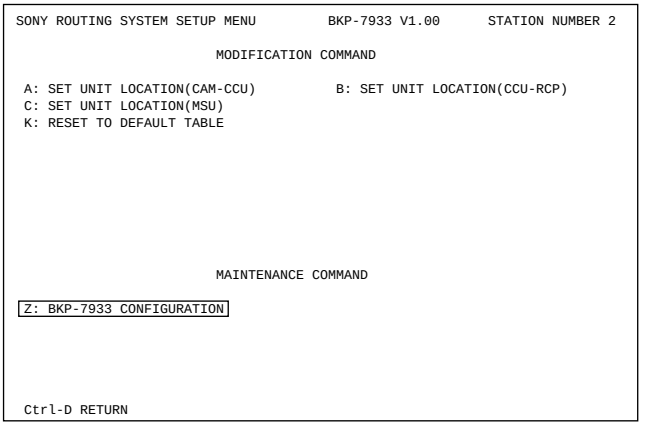
- When you want to use the green tally lamp on the front panel of the CCU, the CCU needs to be modified. Refer to the maintenance manual separately available.
- Refer to the installation manual of the Tally Interface Unit BKDS-7700, Section 3-2-4, “Tally Configuration” for details of the tally system.

Connecting Peripheral Equipment

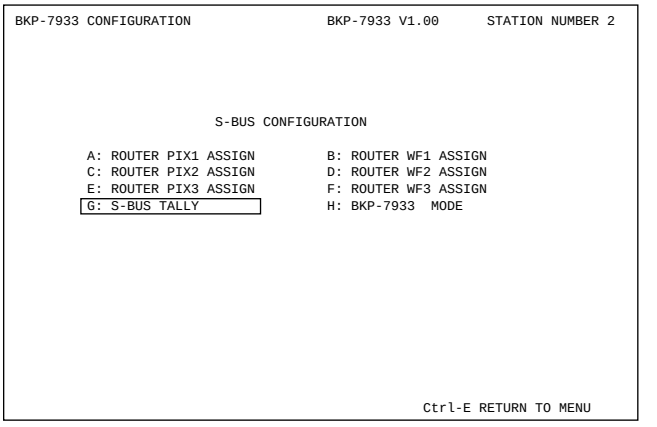


Setting from the S-BUS Primary Station

1. Select the menu item “Z:BKP-7933 CONFIGURATION” and press ENTER.

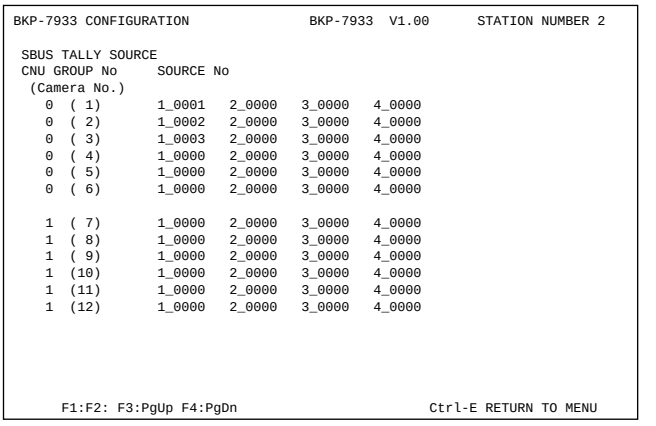


2. Select “G: S-BUS TALLY” using the cursor key and press ENTER.



3. Move the cursor key to the desired position to be changed and press ENTER. (The display enters the input mode.)

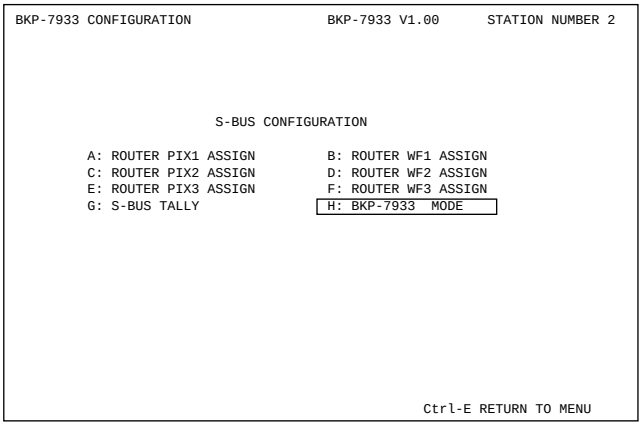
4. Input the SOURCE No. using the numeric keys and press ENTER. At this time, assign the SOURCE No. that has already been set by the system, to the camera number.



Notes

- Any number in the range of 1 to 512 can be set.
- Up to four group tallies can be set.
- The installation shows the display on which the tally signal of the SOURCE No. 0001 is assigned to the Camera No.1.

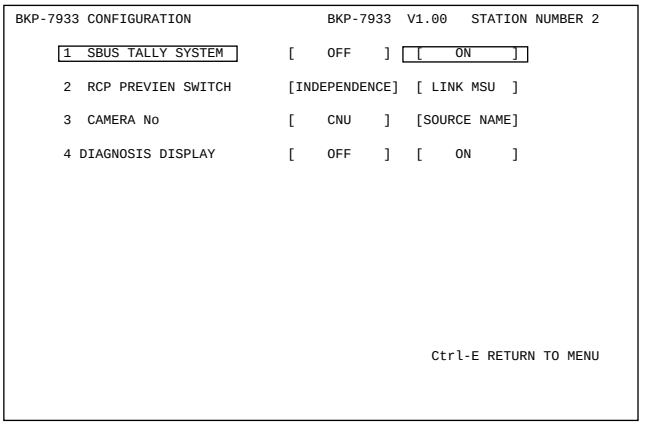
5. Return to the previous screen by pressing Ctrl - E, and select the menu item “H:BKP-7933 MODE”.



6. Set the “1 SBUS TALLY SYSTEM” to the ON position using the cursor key and press ENTER.

Note

The tally system can be turned on and off using this menu.



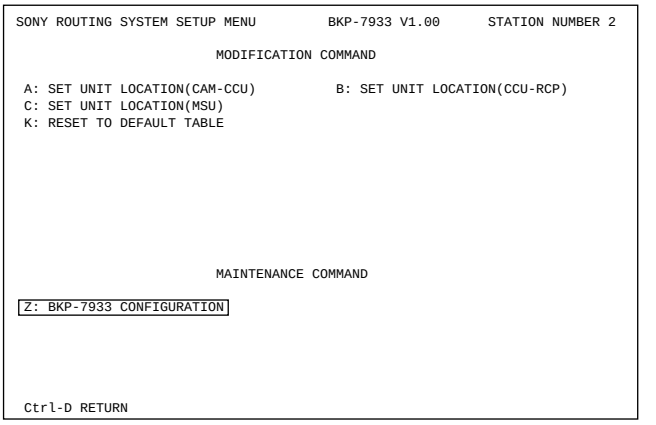
1-7-9. Displaying the Self-diagnostic Information on the Terminal

Description of Operation

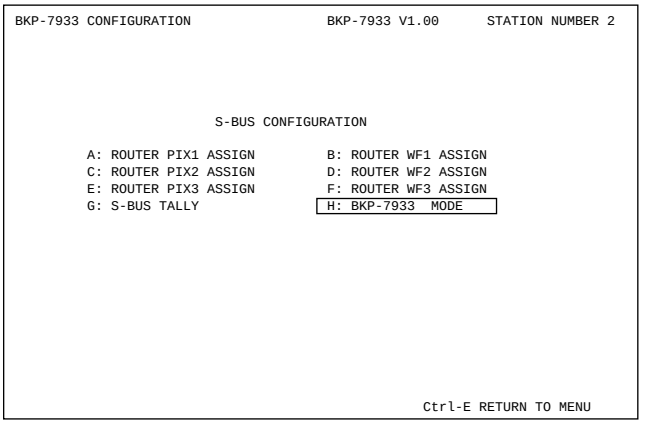
Set the menu as follows when you want to display the self-diagnostic information on the display. When this setting is executed, the status of the self-diagnostics is displayed on the terminal when the self-diagnostic information of the camera or CCU changes. The log of the self-diagnostic information can be checked by selecting “W: SYSTEM STATUS LOG” on the BKPF-R70 menu display.

Setting from the S-BUS Primary Station

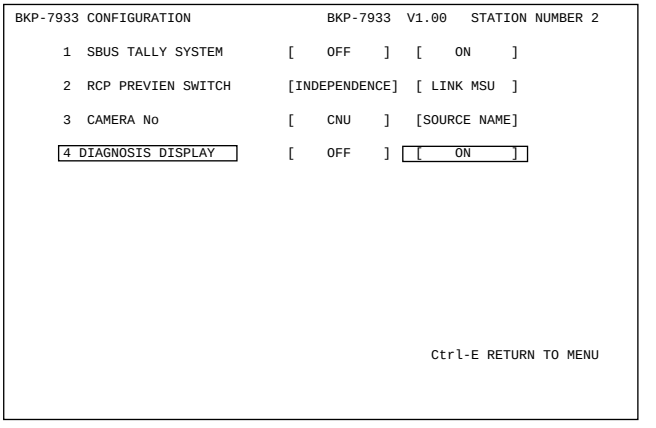
1. Select the menu item “Z:BKP-7933 CONFIGURATION” and press ENTER.



2. Select the menu item “H: BKP-7933 MODE” and press ENTER.



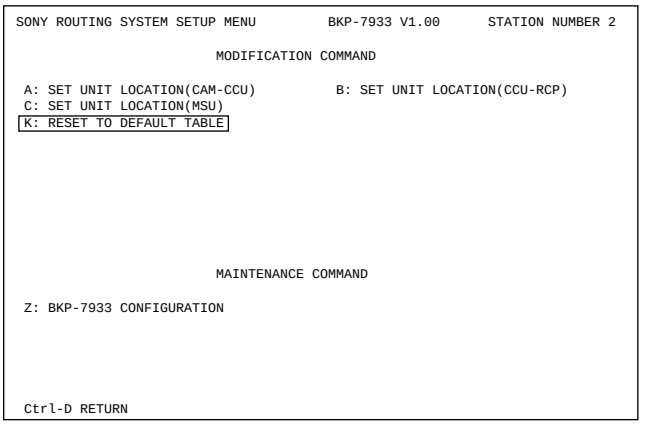
3. Set the “4 DIAGNOSIS DISPLAY” to the ON position using the cursor key and press ENTER.



1-7-10. Returning the Setups of the MODIFICATION COMMAND to the Factory Default Values

1. Select “K: RESET TO DEFAULT TABLE” using the cursor key and press ENTER.

2. The message “Reset to Default table?” appears in the bottom right of the screen. Select “Y” and press ENTER.



1-7-11. Returning the Setups of the MAINTENANCE COMMAND to the Factory Default Values

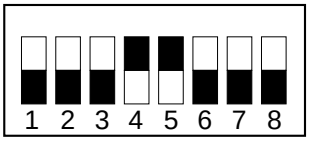
1. Establish the following setup of the switch S2 on the IF-689 board depending upon the type (analog/digital) of routing switcher.

   S2-1:
   When the analog routing switcher (BVS-V3232) is used
   → ON
   When the digital routing switcher (DVS-V1616) is used
   → OFF
   S2-2 to S2-8: OFF

   Factory default setting: All OFF

2. Set the switch S5 on the IF-689 board as shown below.

   S5-1 to S5-3: OFF
   S5-4: ON
   S5-5: ON
   S5-6 to S5-8: OFF

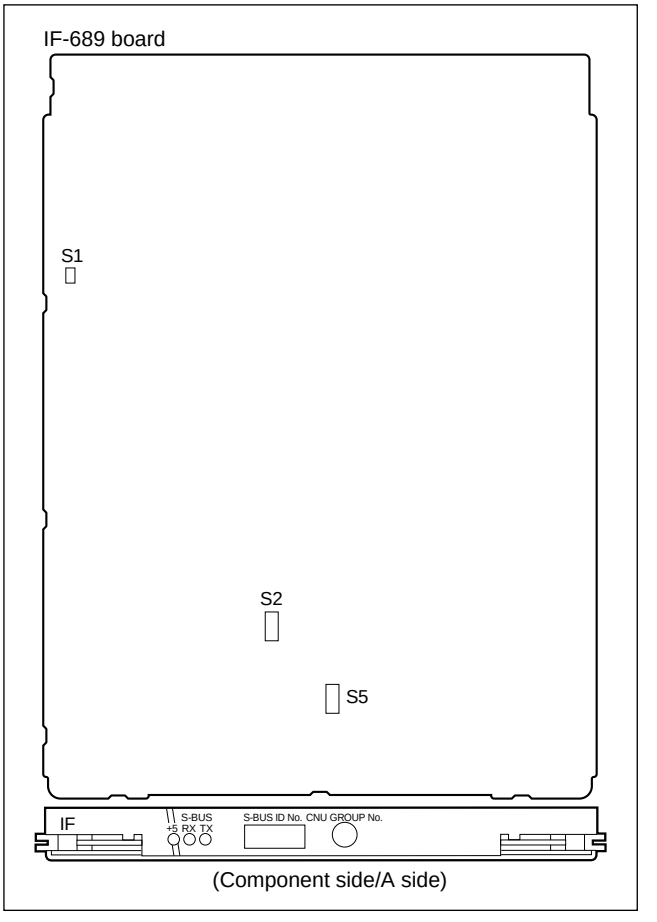


   (■ indicates the switch lever position)

   Factory default setting: All OFF

3. Turn on the main power of the CNU-700, or press the RESET switch S1.
   Note
   All data is initialized in about five seconds.

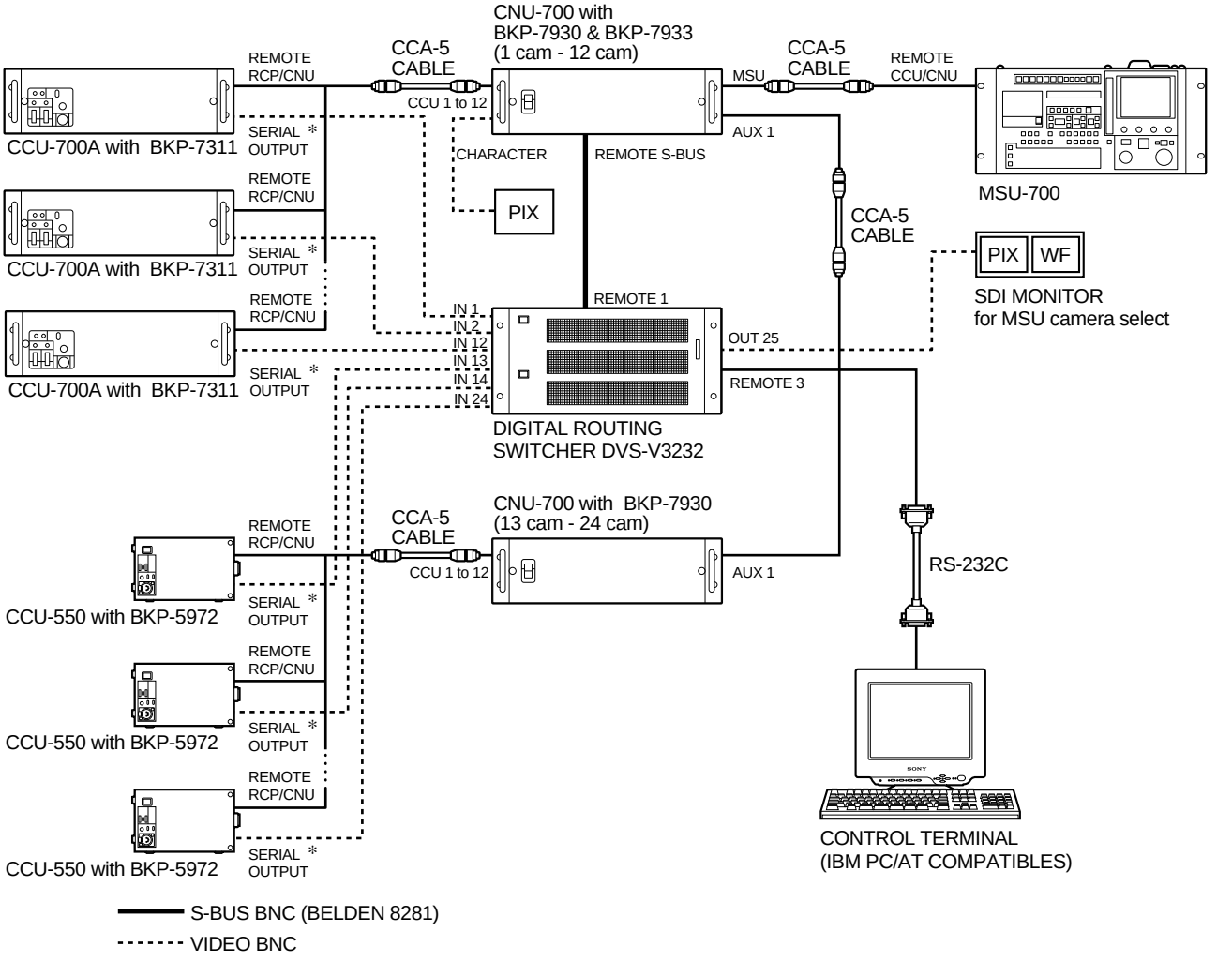
4. Set the switch S5 to the factory default position.



1-7-12. Connecting 13 or More Cameras

An example of connecting 13 or more cameras is shown below. Two CNU-700s are necessary for connecting 13 or more cameras. (To connect 19 or more cameras, two CNU-700s containing the CNU IF board BKP-7930 are necessary. If you want to connect 25 or more cameras, contact your local Sony Sales Office/Service Center.

Example of Controlling 13 or More Cameras



* If using the ANALOG ROUTING SWITCHER (BVS-V3232 etc.), connect it to PIX, WF or VBS connector

1-8. Data Backup/Restore

Notes

- The description in this section assumes that BKPF-R70 is used as the primary station.
- The setup data of the unit is backed up and restored by using the BZR-10 (software for data backup) supplied with the BKPF-R70.
- In this section, a lower-case letter is used in the sample screens. If you want, you can type with a capital letter unless otherwise specified. Not type quotation marks (“ ”) but only 1 when the procedure describes as follows; Type “1”.
  The sample screens use roman letters, boldface letters, and symbols according to the follows.

Sample	Description
C:\>	Message displayed automatically by a program
install c:	Characters to be typed by user
↵	Enter key/Return key
␣	Space bar (One space is made.)

1-8-1. Installing the BZR-10

BZR-10 operates on the MS-DOS version 6.2 or in the DOS mode of Windows95.
Use the IBM PC/AT compatible personal computer in which the terminal software has been already installed.

1. Insert the BZR-10 floppy disk (abbreviated as FD hereafter) in an FD drive of a personal computer.
2. Select the FD drive (Which is “A” drive in this document) in which the BZR-10 FD is inserted.
   C:\>**a:**↵
3. Type as follows. The BZR-10 software is installed to the hard disk.
   A:\>**install c:**↵
4. Type as follows. The mode enters the EDIT command.
   Type “c:\router>” at the end of PATH. The PATH is added to AUTOEXEC.BAT file.
   A:\>**c:**↵
   C:\ROUTER> **cd␣..**↵
   C:\>**edit autoexec.bat**↵
   PATH C:\;C: ⋯**;c:\router**
5. Save the AUTOEXEC.BAT file. Quit the edit command.
6. Remove the FD from the disk drive.
7. Use the Ctrl-Alt-Del key combination.
   The personal computer restarts.

1-8-2. Data Backup (Uploading)

Note

For the details of the menu screen and the setting procedure in terminal mode, refer to the installation manual for system setup of ROUTING SWITCHER SYSTEM.
For obtaining the installation manual of ROUTING SWITCHER SYSTEM, contact your local Sony Sales Office/Service Center.

1. Install the BZR-10 software. (Refer to Section 1-8-1.)
2. Connect a personal computer to the REMOTE 3 port of the BKPF-R70 with an RS-232C cross cable (9-pin to 9-pin).
3. Set the TERM/ISR switch S2-3 on the CPU-256 board of the BKPF-R70 to OFF (TERM).
4. Turn on the power of all the equipment on the S-BUS data link.
5. Turn on the power of the personal computer.
6. Start up the terminal software of the personal computer.
7. Use the Ctrl-x key combination.
   The menu screen of the primary station is displayed.

```
SONY ROUTING SYSTEM SETUP MENU            BKPF-R70  V1.02T  STATION NUMBER 1


                      MODIFICATION COMMAND

 A: DISPLAY CONTROL AREA                 B: SET SOURCE/DEST TYPE
 C: SET DESTINATION NAME                 D: SET SOURCE NAME
 E: SET LEVEL TABLE                      F: SET ACTIVE UNIT NUMBER
 G: UPDATE BACKUP CONTROLLER             H: SET GLOBAL PHANTOM
 J: NAME STYLE(Type + Num)               K: RESET TO DEFAULT TABLE
 L: SET PHYSICAL ASSIGNMENT              M: SET INHIBIT TABLE
 N: SET DESCRIPTION NAME GROUP           O: SET TIE LINES
 P: CHANGE PASSWORD                      Q: CHANGE CROSSPOINT
 R: CALL SECONDARY STATION

                      MAINTENANCE COMMAND

 ------------------                      T: SET CLOCK
 U: SELECT CONTROL MODE                  V: SELECT WARNING DISPLAY  (ON)
 W: SYSTEM STATUS LOG                    X: DISPLAY S-BUS COMMUNICATION
 Y: DISPLAY TABLE DATA                   Z: SET UNIT DETECTABLE


    Ctrl_X:QUIT SETUP MENU
```

8. Select “Z:SET UNIT DETECTABLE” and change the settings of the secondary stations required to be backed up to enable.
   (1) Move the cursor under the ID number of the BKP-7933.
   (2) Press the Enter key. Question mark “?” turns on.

   Note

   Question mark “?” means the unit is enabled. When the Enter key is pressed again, question mark “?” disappears.
9. Use the Ctrl-e key combination. Next, use the Ctrl-x key combination.
   Return to the menu screen of the primary station.
10. Quit the terminal software.
11. Insert the formatted FD in the disk drive of the personal computer.
12. Type as follows.

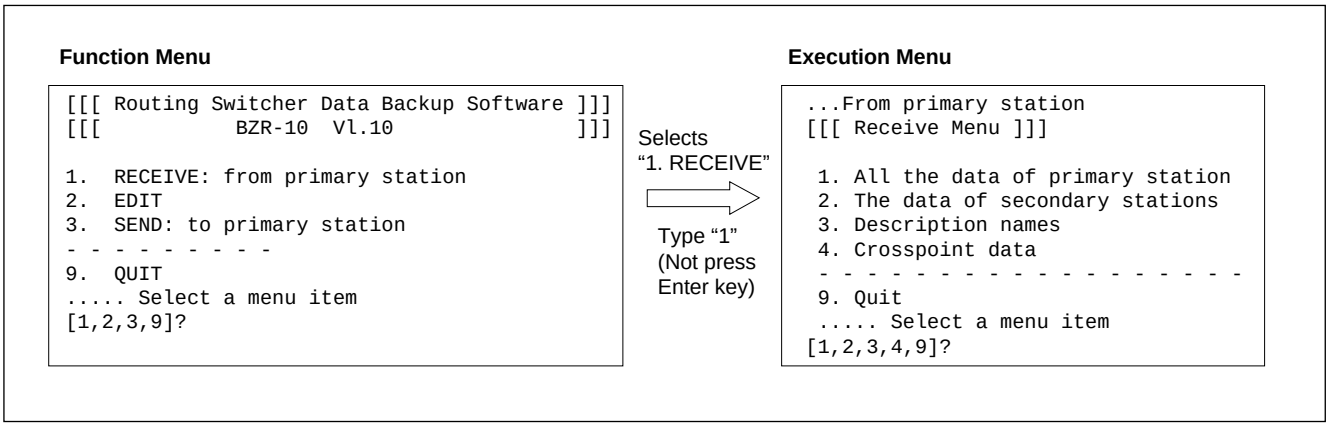
```
C:\>a: ↵
A:\>* ↵
```

   Type “a” or “a1”.

   Note

   “a” or “a1” is the command to start up the backup software.
   Type “a” or “a1” according to the baud rate setting of S2-4 on the CPU-256 board of the BKPF-R70.
   a: When S2-4 is set to ON (The baud rate is 9600 bps)
   a1: When S2-4 is set to OFF (The baud rate is 38400 bps)

13. Type “1” at the Function menu. (“1. RECEIVE” is selected.)
    The display changes to the Execution menu screen.



14. To back up the data of the BKP-7933, type “2”. (“2. The data of secondary stations” is selected.) The data is backed up in the FD.
15. Type “9” twice. (“9. Quit” is selected.) The backup mode is terminated.
16. Start up the terminal software.
17. Use the Ctrl-x key combination.
    The display changes to the menu screen of the primary station.
18. Select “Z : SET UNIT DETECTABLE” and return the settings of the secondary stations to the previous settings.
19. Quit the terminal software.

1-8-3. Data Restore (Downloading)

After the BZR-10 is installed according to Section 1-8-1, perform the following procedures.

1. Insert the FD on which the data is stored in an FD drive of the personal computer.
2. Type as follows.

```
C:\>a: ↵
A \>* ↵
```

Type “a” or “a1”.

Note

“a” or “a1” is the command to start up the backup software.
Type “a” or “a1” according to the baud rate setting of S2-4 on the CPU-256 board of the BKPF-R70.
a: When S2-4 is set to ON (The baud rate is 9600 bps)
a1: When S2-4 is set to OFF (The baud rate is 38400 bps)

3. Type “3” at the Function menu. (“3. SEND” is selected.)
   The display changes to the Execution menu screen.

Function Menu

```
[[[ Routing Switcher Data Backup Software ]]]
[[[           BZR-10  V1.10               ]]]

1. RECEIVE: from primary station
2. EDIT
3. SETD: to primary station
- - - - - - - -
9. QUIT
..... Select a menu item
[1,2,3,9]?
```

Selects “3. SEND”

Type “3” (Not press Enter key)

Execution Menu

```
 ...To primary station
 [[[ Send Menu ]]]

  1. All the data of primary station
  2. The data of secondary stations
  3. Description names
  4. Crosspoint data
  - - - - - - - - - - - - - - - - - -
  9. Quit
  ..... Select a menu item
[1,2,3,4,9]?
```

4. To restore the data of the BKP-7933, type “2”. (“2. The data of secondary stations ” is selected.)
5. Type “9” twice. (“9. Quit” is selected.) The backup mode is terminated.

1-9. Modification of RCP

The video on the preview monitor can be selected by the PREVIEW switch of the RCP-700/701/720/721/730/731. (Refer to section 1-7-4 for details.)
However, version check of the ROM that is installed in the board of the RCP side, and modification of the board in the RCP are required.

Note

If you want to switch the video on the preview monitor using the RCP-740/741, contact your local Sony Sales Office/Service Center.

1-9-1. Checking ROM Version

Be sure to check that the ROM version for the MPU board of the RCP side is Ver. 2.00 or higher. When the ROM needs to be replaced, contact your local Sony Sales Office/Service Center.

ROM Version

RCP-700/701	IC8/MPU-92:	Ver. 2.00 or higher
RCP-720/721/730/731	IC10/MPU-79:	Ver. 2.00 or higher

1-9-2. Modification of RCP-700/701

Note

After this modification is implemented, the PREVIEW switch of the RCP-701 does not turn on even if it is pressed.

Required Parts

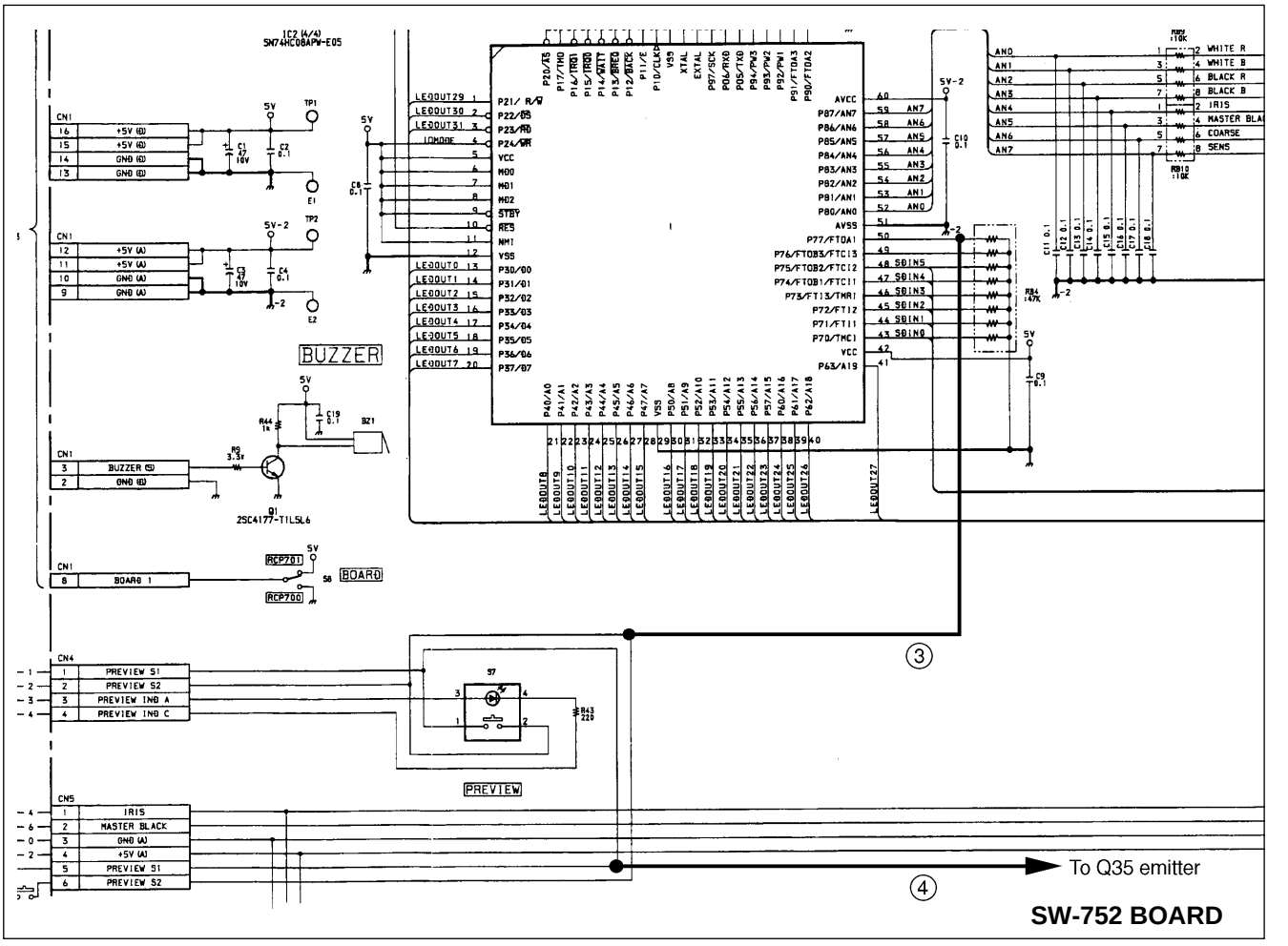
Description	Sony P/N	Q'ty
Diode 1SS300-TE85L	8-719-024-81	1
Jumper wire	–	–

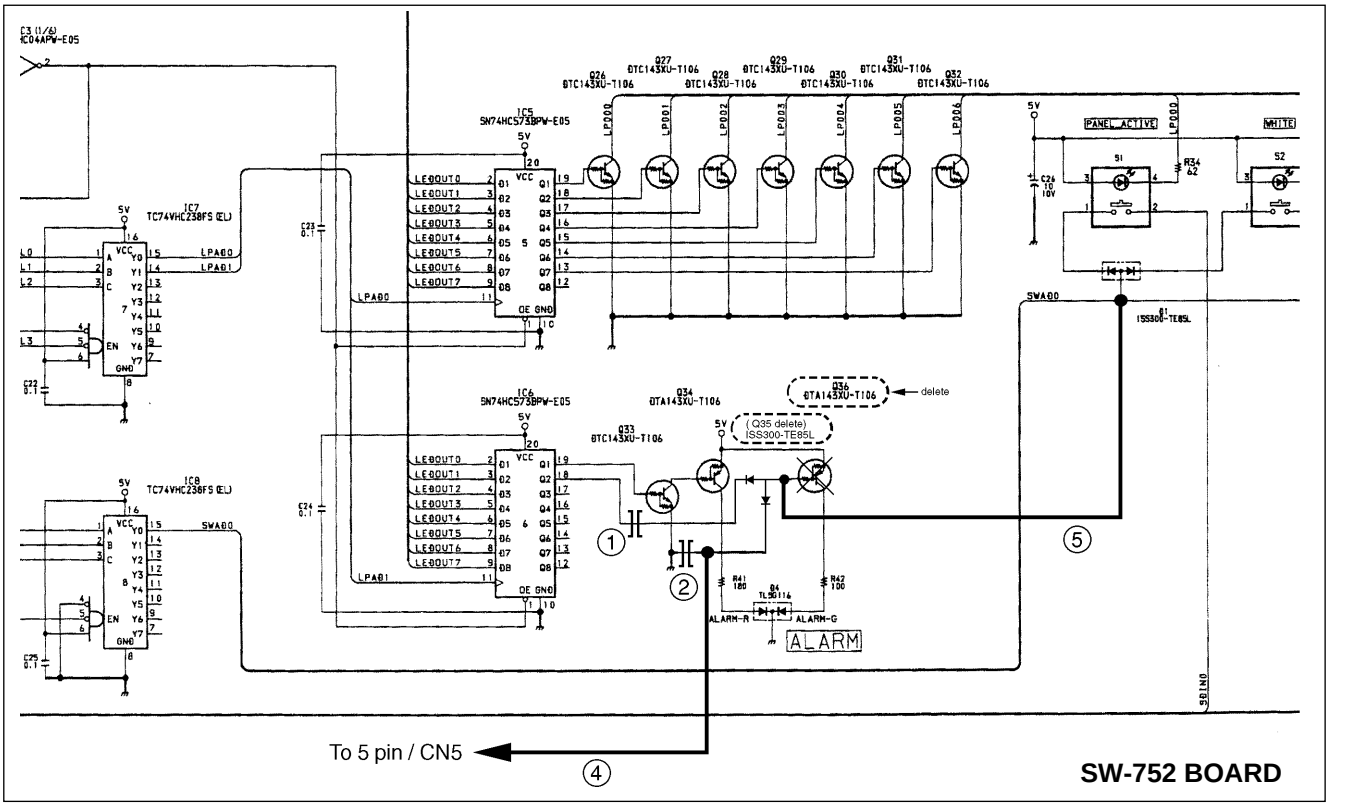
Modification Procedure (SW-752 Board)

1. Remove Q35 and Q36.
2. Cut the printed foil pattern between Q35 base and pin-18/IC4. (①)
3. Cut the printed foil pattern between Q35 emitter and Q34 emitter. (②)
4. Connect the three jumper wires by soldering.
   Between pin-2/CN4 and pin-50/IC1 (③)
   Between pin-5/CN5 and Q35 emitter (④)
   Between Q35 collector and D1 anode (⑤)
5. Connect a diode 1SS300-TE85L to the soldering land of Q35 by soldering.

Setting Switch on MPU-92 Board

S4-2/MPU-92 board → ON


BUZZER
PREVIEW
BOARD
To Q35 emitter
SW-752 BOARD


PANEL_ACTIVE
WHITE
ALARM
ALARM-R
ALARM-G
To 5 pin / CN5
SW-752 BOARD

1-9-3. Modification of RCP-720

Required Part

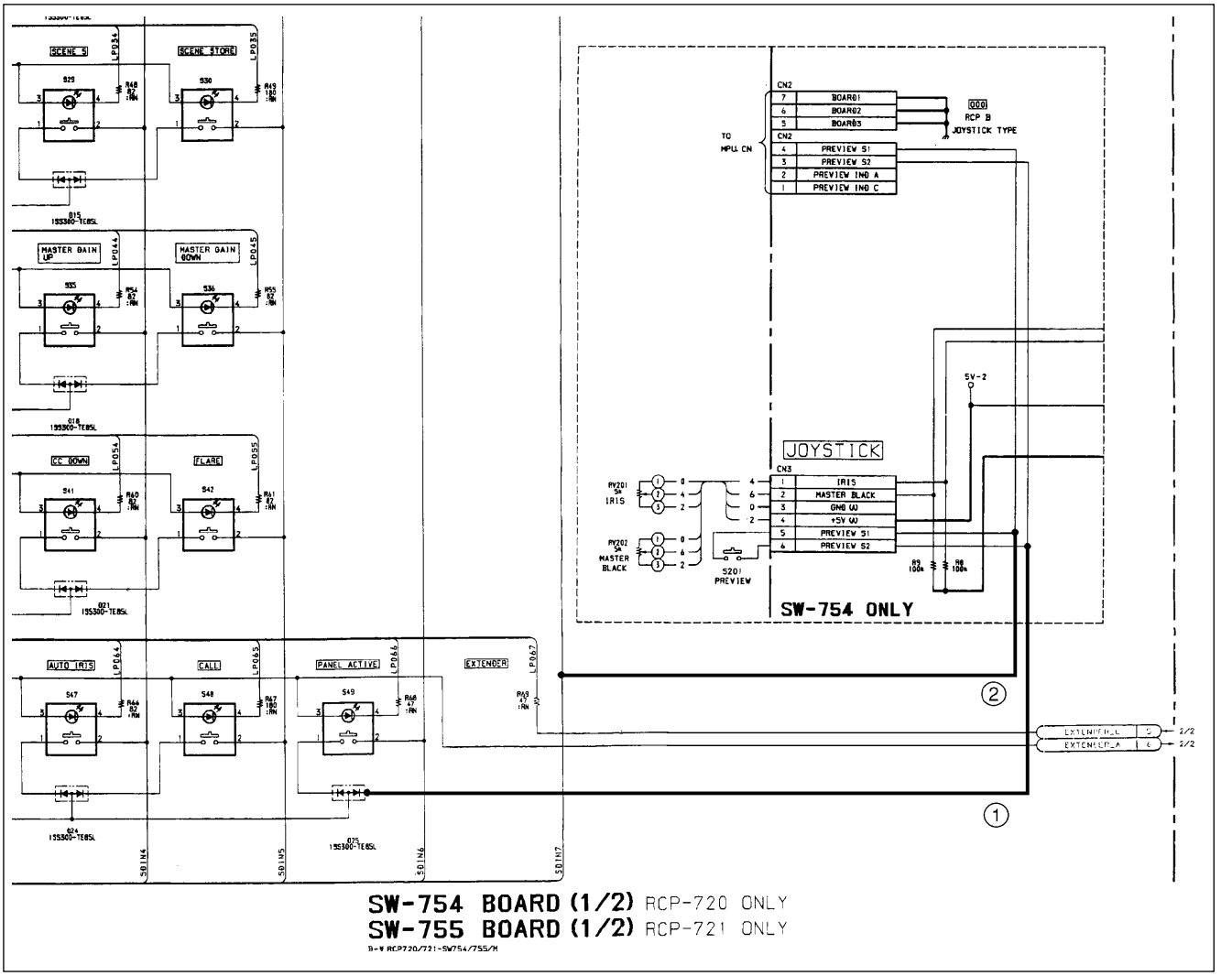
Description	Sony P/N	Q'ty
Jumper wire	–	–

Modification Procedure

1. Connect the two jumper wires by soldering. (SW-754 board)
   Between pin-6/CN3 and D25 cathode (①)
   Between pin-5/CN3 and pin-2/S24 (②)
2. Disconnect CN101/CN-1187 board.

Setting Switch on MPU-92 Board

S4-7/MPU-79 board → ON



1-9-4. Modification of RCP-721

Required Parts

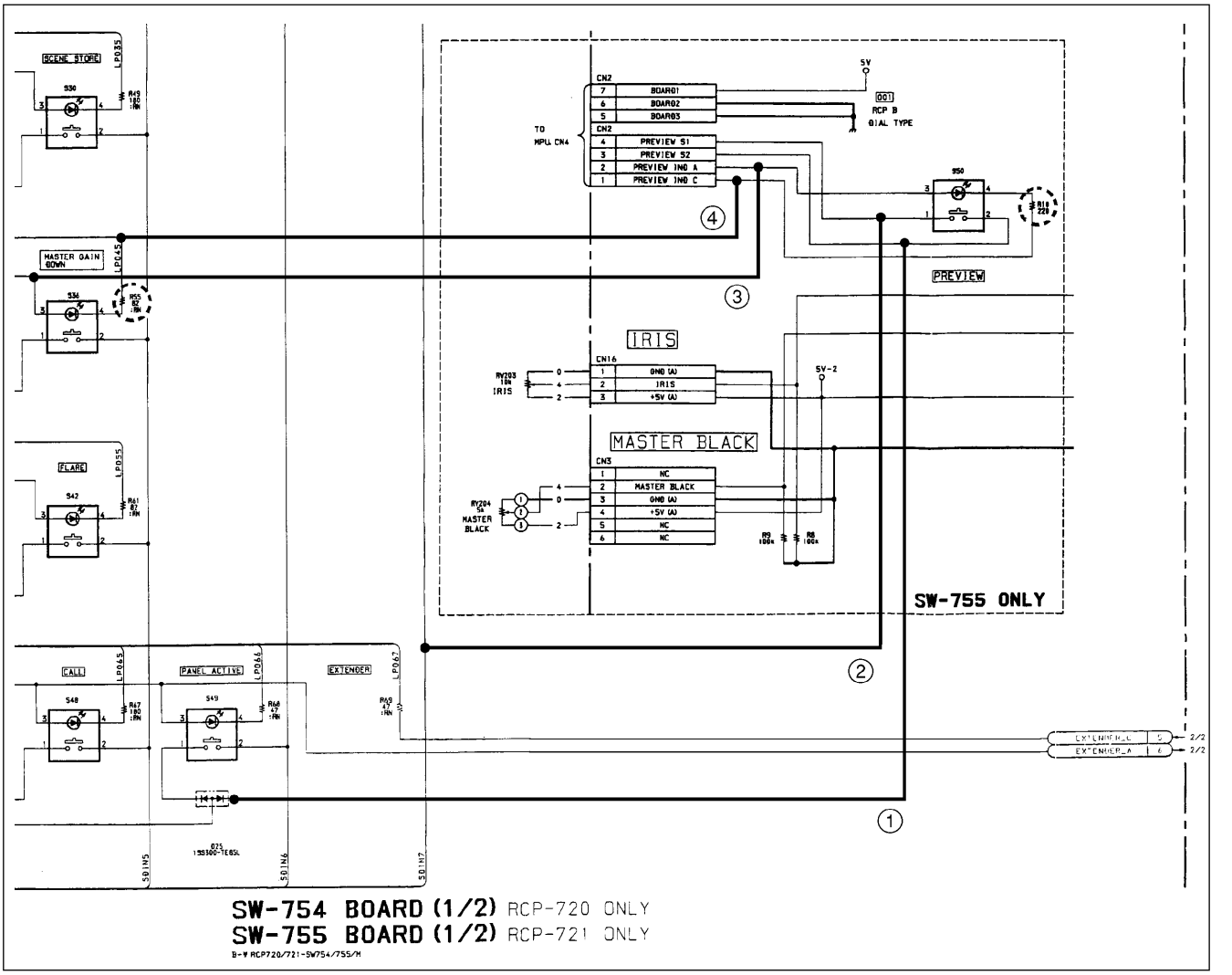
Description	Sony P/N	Q'ty
Resistor, Chip Metal 82 Ω	1-216-625-11	1
Jumper wire	–	–

Modification Procedure (SW-752 Board)

1. Remove the resistors R10 and R55/SW-755 board.
2. Connect a metal resistor 82 Ω to the soldering land of R10, by soldering.
3. Connect the four jumper wires by soldering to the following locations. (SW-755 board)
   Between pin-3/CN2 and D25 cathode (①)
   Between pin-4/CN2 and pin-2/S24 (②)
   Between pin-2/CN2 and pin-3/S36 (③)
   Between pin-1/CN2 and R55 (④)
4. Disconnect CN101/CN-1187 board.

Setting Switch on MPU-92 Board

S4-7/MPU-79 board → ON



1-9-5. Modification of RCP-730/731

Required Parts

Description	Sony P/N	Q'ty
Resistor, Chip Metal 0 Ω	1-216-295-11	3
Resistor, Chip Metal 82 Ω	1-216-625-11	1

Modification Procedure (SW-893 Board)

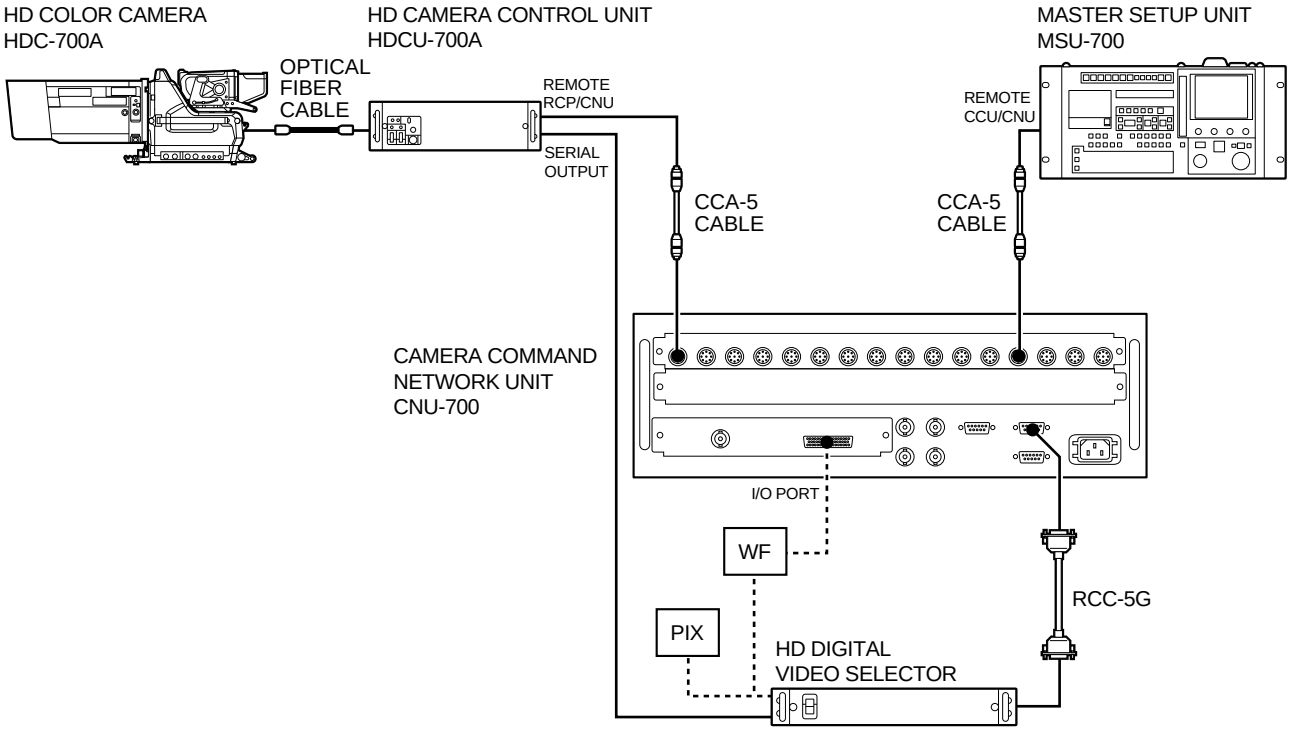
1. Remove soldering of R1, R2, R3 and R12.
2. Connect metal resistors 0 Ω to the soldering land of R4, R6 and R7 by soldering.
3. Connect metal resistors 82 Ω to the soldering land of R5 by soldering.

Setting Switch on MPU-92 Board

S4-7/MPU-79 board → ON

1-10. Using the BKP-7933 in the HD System

Connecting Peripheral Equipment



1-10-1. Controlling the Routing Switcher via the RS-422A Interface

The routing switcher can be controlled via the RS-422A interface. Modify the AT-89 board of the CNU-700, replace ROM of the MSU and make the MSU assignment referring to the following description.

Required Parts

Description	Q'ty	Remarks
Jumper wire	1	–
RS-422 harness (30P-30P)	1	Supplied with HKCF-700
ROM MSU-700/ROM-25 board	1	Supplied with HKCF-700

Modification of AT-89 Board

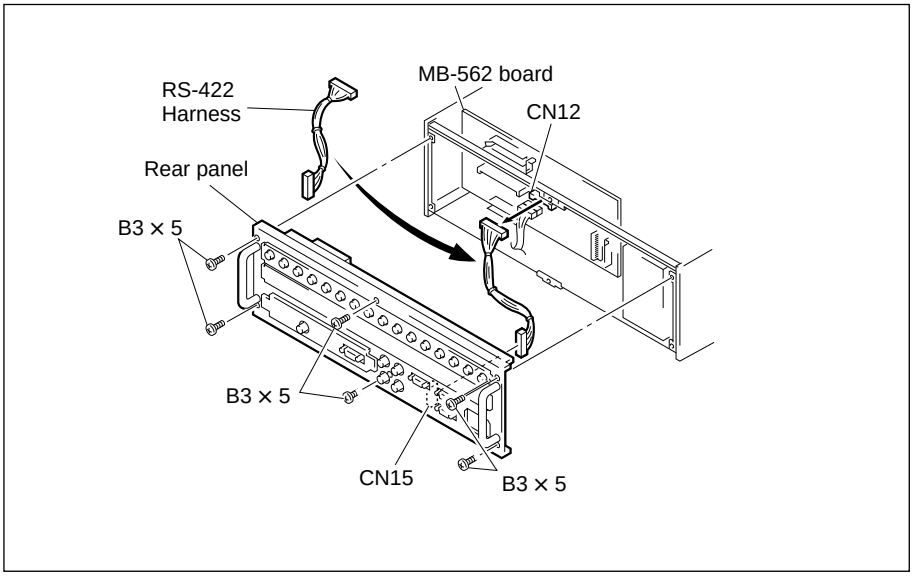
1. Connect a jumper wire between B7 pin/CN2 and B9 pin/CN2 of the AT-89 board of the CNU-700 by soldering.
2. Remove the six screws and remove the rear panel. Remove the harness that is connected to the connector CN12 on the MB-562 board and the connector CN15 on the CN-1001 board. Connect the RS-422 harness that is supplied, instead of the removed harness.

   Note

   Be careful that the either end of the RS-422 harness has the specified destination of connection. The following labels are attached to the rear of the housing at both ends.

   [1 5] → To CN-15/CN-1001 board

   [1 2] → To CN-12/MB-562 board



3. Remove the IF-480 board from of the first slot and set the switches as shown below.

   S802 to S806: Insert a shorting plug between pin-2 and pin-3.
   (The command interface is set to RS-422A.)

   S901-4: ON
   S901-5: OFF
   S901-6: OFF
   (The baud rate is set to 38.4 k bps.)

   Note

   There can be a case that the optional IF-480 board has already been installed to the second slot. In such a case, setting the switches on the IF-480 board in the second slot is not necessary. (Switches are invalid even though they are set.)

ROM Replacement of the MSU-700

Replace the IC10 on the CPU-171 board of the MSU-700 with the ROM MSU-700 that is mounted in the IC socket of the ROM-25 board. Refer to the MSU-700 maintenance manual for removal of the CPU-171 board.

Setting of the MSU Assignment

Set the control mode to the LOCAL MSU mode (LOCAL mode) using the MSU assignment menu. Refer to the BVP-900-series System Manual BKP-9901 (available separately) Section 3-4-3 “MSU Assignment” for the setting procedure.

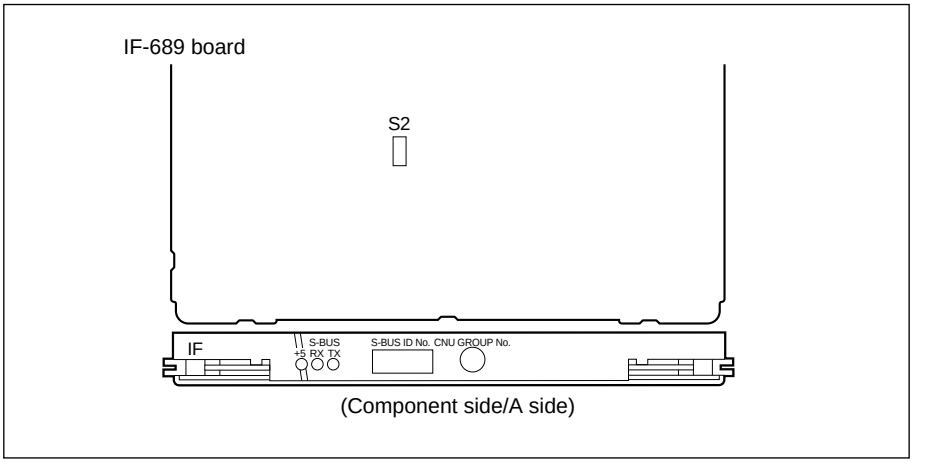
1-10-2. Controlling a Waveform Monitor

A waveform monitor can be controlled from the MSU via the I/O PORT connector of the BKP-7933, by setting the switches on the IF-689 board of the BKP-7933.

Note

The following setting is effective to control a waveform monitor from the MSU that is connected to the IF-480 board of the CNU-700 in which the BKP-7933 is installed. A waveform monitor cannot be controlled by the MSU that is connected to the optional IF-480 board (CNU IF board BKP-7930).

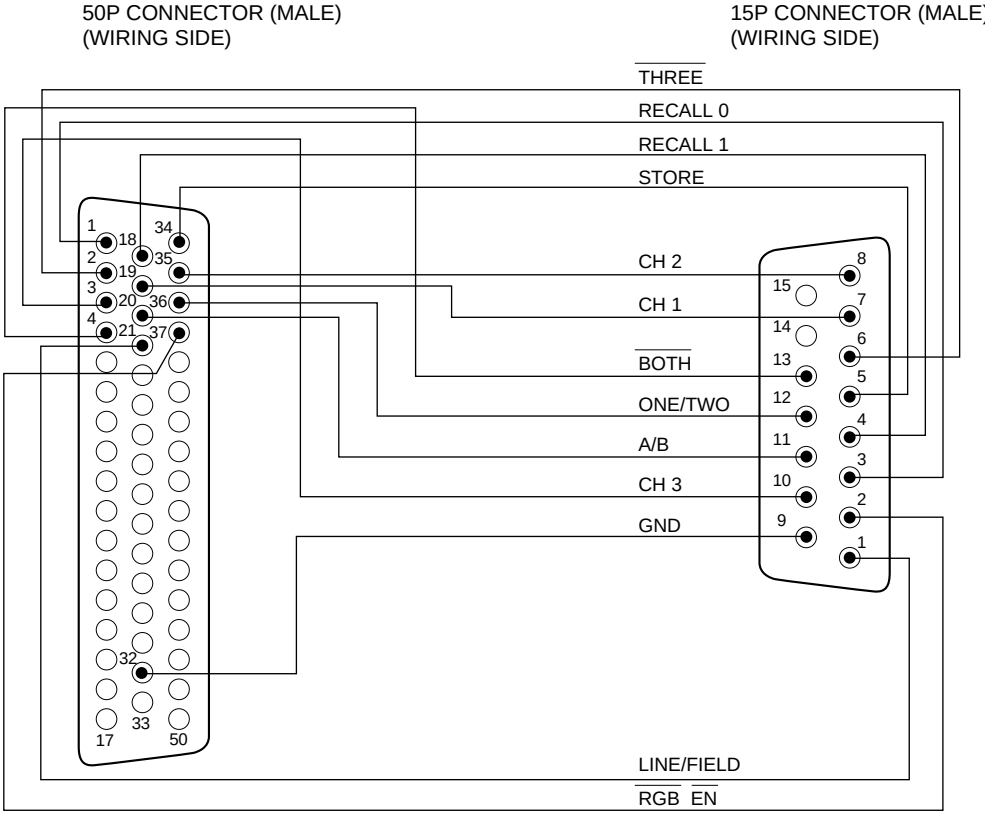
1. Set the switch S2-2 on the IF-689 board to OFF.
   When it is set to OFF, remote control mode of the waveform monitor is selected.
2. Set the switch S2-3 on the IF-689 board in accordance with a waveform monitor in use.
   HD ANALOG system waveform monitor (such as Tektronix 1730HD) → ON
   RECALL system waveform monitor → OFF



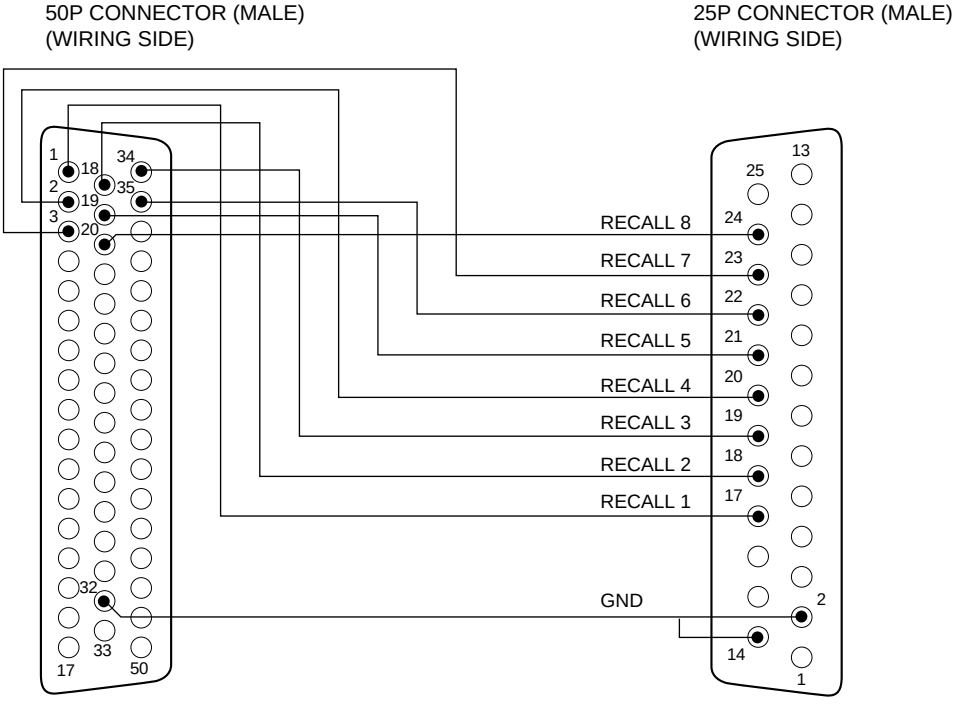
Connection

The wiring diagram of the cable connecting the I/O PORT connector and a waveform monitor is shown below. The wiring diagram can change depending on the system of the waveform monitor.

HD ANALOG system

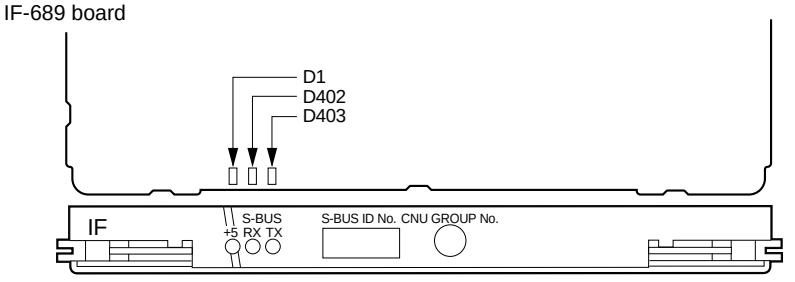


RECALL system



1-11. Description on Internal Indicators

Ref.No.	Indicator Name	Color	Status
D1	+5 V	Green	Lights when +5 V is normally supplied to the IF-689 board
D402	S-BUS RX	Green	Lights when the serial data is received from the REMOTE S-BUS connector
D403	S-BUS TX	Green	Lights when the serial data is transmitted to the REMOTE S-BUS connector



(Component side/A side)

BKP-7933 (SY) J, E
3-201-655-02

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